

EXHIBIT 103-B
Redacted Version of
Document Sought to be Sealed

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

IN RE: FACEBOOK, INC., MDL No. 2843
CONSUMER USER PROFILE Case No.
LITIGATION 18-md-02843-VC-JSC

This document relates to:
ALL ACTIONS

ZOOM DEPOSITION OF FACEBOOK's 30(b)(6)
CORPORATE REPRESENTATIVE - MICHAEL PATRICK CLARK
(Reported Remotely via Video & Web Videoconference)
Denver, Colorado (Deponent's location)
Wednesday, May 18, 2022
Volume I

STENOGRAPHICALLY REPORTED BY:
REBECCA L. ROMANO, RPR, CSR, CCR
California CSR No. 12546
Nevada CCR No. 827
Oregon CSR No. 20-0466
Washington CCR No. 3491
JOB NO. 5210145
PAGES 1 - 251

Page 1

1 UNITED STATES DISTRICT COURT
2 NORTHERN DISTRICT OF CALIFORNIA
3

4 IN RE: FACEBOOK, INC., MDL No. 2843
5 CONSUMER USER PROFILE Case No.
6 LITIGATION 18-md-02843-VC-JSC
7
8

9 _____
10 This document relates to:
11 ALL ACTIONS
12
13
14
15
16
17
18
19
20
21
22
23
24
25

DEPOSITION OF MICHAEL PATRICK CLARK,
taken on behalf of the Plaintiffs, with the
deponent located in Denver, Colorado, commencing at
10:07 a.m., Wednesday, May 18, 2022, remotely
reported via Video & Web videoconference before
REBECCA L. ROMANO, a Certified Shorthand Reporter,
Certified Court Reporter, Registered Professional
Reporter.

APPEARANCES OF COUNSEL

(All parties appearing via Web videoconference)

For the Plaintiffs:

BLEICHMAR FONTI & AULD LLP

BY: LESLEY E. WEAVER

BY: MATTHEW MELAMED

BY: JOSHUA SAMRA

Attorney at Law

555 12th Street

Suite 1600

Oakland, California 94607

(415) 445-4003

lweaver@bfalaw.com

jsamra@bfalaw.com

/////

APPEARANCES OF COUNSEL

(All parties appearing via Web videoconference)

For the Plaintiffs:

KELLER ROHRBACK L.L.P.

BY: DAVID KO

BY: CARI CAMPEN LAUFENBERG

BY: DEREK W. LOESER

Attorneys at Law

1201 Third Avenue

Suite 3200

Seattle, Washington 98101

(206) 623-1900

dko@kellerrohrback.com

claufenberg@kellerrohrback.com

dloeser@kellerrohrback.com

/////

APPEARANCES OF COUNSEL

(All parties appearing via Web videoconference)

For Facebook, Inc.:

GIBSON, DUNN & CRUTCHER LLP

BY: ROBERT C. BLUME

BY: MIKE M. ULMER

Attorneys at Law

1801 California Street

Suite 4200

Denver, Colorado 80202-2642

(303) 298-5735

rblume@gibsondunn.com

mulmer@gibsondunn.com

/////

1 APPEARANCES OF COUNSEL(cont'd)
2 (All parties appearing via Web videoconference)

3

4 For Facebook, Inc.:

5 GIBSON, DUNN & CRUTCHER LLP

6 BY: ROSEMARIE T. RING

7 Attorney at Law

8 555 Mission Street

9 Suite 3000

10 San Francisco, California 94105-0921

11 (415) 393-8247

12 rring@gibsondunn.com

13 and

14 BY: MARTIE KUTSCHER CLARK

15 Attorney at Law

16 1881 Page Mill Road

17 Palo Alto, California 94304-1211

18 (650) 849-5348

19 mkutscherclark@gibsondunn.com

20

21

22

23

24

25 //

1 APPEARANCES OF COUNSEL(cont'd)
2 (All parties appearing via Web videoconference)
3

4 JAMS
5 BY: DANIEL B. GARRIE
6 Special Master
7 555 W. 5th Street
8 32nd Floor
9 Los Angeles, California 90013
10 (213) 253-9706
11 dgarrie@jamsadr.com
12
13
14
15

16 ALSO PRESENT:
17 Ian Chen, Associate General Counsel,
18 Meta Platforms
19 John Macdonell, Videographer
20
21
22
23
24

25 //

I N D E X

DEPONENT	EXAMINATION
MICHAEL PATRICK CLARK	PAGE
VOLUME I	

BY MS. WEAVER	15
---------------	----

E X H I B I T S

NUMBER	PAGE
--------	------

DESCRIPTION

Exhibit 339	Mike Clark Deposition Notes,	33
-------------	------------------------------	----

ADVANCE-META-00000060 -

ADVANCE-META-00000065;

Exhibit 340	User Data Deletion Policy	43
-------------	---------------------------	----

dated October 23, 2020,

ADVANCE-META-00000043 -

ADVANCE-META-00000056;

Exhibit 341	Control Objective - As of	46
-------------	---------------------------	----

10.29.2021,

ADVANCE-META-00000054 -

ADVANCE-META-00000056;

/////

1	E X H I B I T S (cont'd)	
2	NUMBER	PAGE
3	DESCRIPTION	
4	Exhibit 342 Data/DeletingDeletedData -	54
5	Facebook,	
6	ADVANCE-META-00000001 -	
7	ADVANCE-META-00000002;	
8		
9	Exhibit 343 Wiki Page - Deletion	65
10	Framework Overview,	
11	ADVANCE-META-00000003 -	
12	ADVANCE-META-00000004;	
13		
14	Exhibit 344 Email dated Feb 11, 2013	63
15	Subject: 5.2.2.B,	
16	PwC-CPUP_FB00007766 -	
17	PwC-CPUP_FB00007768;	
18		
19	Exhibit 345 Hive Tables,	90
20	FB-CA-MDL-00347605 -	
21	FB-CA-MDL-00347886;	
22		
23		
24		
25	/////	

1	E X H I B I T S (cont'd)		
2	NUMBER		PAGE
3		DESCRIPTION	
4	Exhibit 346	Wiki Page - Mapping	92
5		User-Identifying IDs to RIDs,	
6		ADVANCE-META-00000028 -	
7		ADVANCE-META-00000029;	
8			
9	Exhibit 347	Wiki Page - Hive Anon,	105
10		ADVANCE-META-00000026 -	
11		ADVANCE-META-00000027;	
12			
13	Exhibit 348	Wiki Page - What is UII?,	106
14		ADVANCE-META-00000059;	
15			
16	Exhibit 349	Gibson Dunn Letter dated	127
17		April 11, 2022;	
18			
19	Exhibit 350	Wiki Page - Overview,	138
20		ADVANCE-META-00000030 -	
21		ADVANCE-META-00000031;	
22			
23	Exhibit 351	Privacy Eng,	163
24		FB-CA-MDL-01952478;	
25	/////		

1	E X H I B I T S(cont'd)		
2	NUMBER		PAGE
3		DESCRIPTION	
4	Exhibit 352	Wiki Page - App-Scoped ID	178
5		(ASID) Conversations,	
6		ADVANCE-META-00000008 -	
7		ADVANCE-META-00000009;	
8			
9	Exhibit 353	(skipped)	
10			
11	Exhibit 354	Email dated 10/9/2013	184
12		Subject: New stuff from Box,	
13		PwC_CPUP_FB00020372 -	
14		PwC_CPUP_FB00020380;	
15			
16	Exhibit 355	Wiki Page - Deletion Plan,	194
17		ADVANCE-META-00000021 -	
18		ADVANCE-META-00000022;	
19			
20	Exhibit 356	Wiki Page - Ent Based	195
21		Deleters,	
22		ADVANCE-META-00000023 -	
23		ADVANCE-META-00000025;	
24			
25	/////		

1	E X H I B I T S(cont'd)		
2	NUMBER		PAGE
3		DESCRIPTION	
4	Exhibit 357	Email String Subject:	203
5		Product Close Out Reminder -	
6		August, FB-CA-MDL-03233363 -	
7		FB-CA-MDL-03233365;	
8			
9	Exhibit 358	Excel Spreadsheet,	203
10		FB-CA-MDL-03233365;	
11			
12	Exhibit 359	Wiki Page - UII Definition,	213
13		ADVANCE-META-00000066 -	
14		ADVANCE-META-00000069;	
15			
16			
17	PREVIOUSLY MARKED		
18	NUMBER		PAGE
19	Exhibit 330		33
20			
21			
22			
23			
24			
25	/////		

1 Denver, Colorado; Wednesday, May 18, 2022

2 10:07 a.m.

3 ---o0o---

4
5 THE VIDEOGRAPHER: We're on the record. 10:07:40

6 It's 10:07 a.m. Mountain Time on May 18th, 2022.

7 This is the deposition of Mike Clark, and
8 we're here in the matter of In Re: Facebook, Inc.

9 Consumer Privacy User Profile Litigation. I'm

10 John Macdonell, the videographer, with Veritext. 10:07:57

11 Before the reporter swears the witness,
12 would counsel please identify themselves, beginning
13 with the noticing party, please.

14 MS. WEAVER: Good morning. This is
15 Lesley Weaver of Bleichmar Fonti & Auld, and I 10:08:10
16 represent the plaintiffs.

17 I am taking this deposition today with
18 the assistance of Josh Samra of my firm. And also
19 present are my able co-counsel, Cari Laufenberg and
20 Emma Wright of -- sorry -- of Keller Rohrbach. 10:08:25

21 MR. BLUME: Good morning. Rob Blume from
22 Gibson, Dunn & Crutcher on behalf of Facebook.

23 Here today with Rose Ring,
24 Martie Kutscher Clark and Mike Ulmer, as well
25 Ian Chen from the client. 10:08:42

Page 13

1 SPECIAL MASTER GARRIE: This is 10:08:50
2 Special Master Garrie. I'm here on behalf of the
3 Court.

4 THE COURT REPORTER: At this time, I will
5 ask counsel to agree on the record that there is no 10:08:54
6 objection to this deposition officer administering
7 a binding oath to the deponent via remote
8 videoconference, starting with the noticing
9 attorney, please.

10 MS. WEAVER: Yes, no objection. 10:09:15

11 MR. BLUME: No objection from Facebook.

12 THE COURT REPORTER: Mr. Clark, If you
13 could raise your right hand for me, please.

14 THE DEPONENT: (Complies.)

15 THE COURT REPORTER: You do solemnly 10:09:20
16 state, under penalty of perjury, that the testimony
17 you are about to give in this deposition shall be
18 the truth, the whole truth and nothing but the
19 truth?

20 THE DEPONENT: I do. 10:09:20

21

22

23

24

25 ///// 10:09:35

1 MICHAEL PATRICK CLARK, 10:09:38
2 having been administered an oath, was examined and
3 testified as follows:

4

5 EXAMINATION 10:09:38
6 BY MS. WEAVER:

7 Q. Good morning, Mr. Clark. I'm
8 Lesley Weaver, and I'll be taking your deposition
9 today.

10 Would you mind stating, for the record, 10:09:44
11 your full name and your place of employment.

12 A. Sure.

13 It's Mike Clark. My legal name is
14 Michael Patrick Clark. Place of employment is
15 Facebook or Meta. 10:10:01

16 Q. And in what city are you currently
17 employed?

18 A. I'm a remote employee from Menlo Park,
19 California, living in Denver, Colorado.

20 Q. Thank you. 10:10:15
21 How long have you worked for Facebook?

22 A. A little over three years.

23 Q. And what's your current role and title?

24 A. Title is director of product management.

25 Q. And have you always held that title? 10:10:29

Page 15

1 A. I was a product manager when I started. 10:10:32

2 About the same level the whole time.

3 Q. What is a product manager?

4 A. A product manager -- product manager

```
5 |     helps pull together the specifications for both
```

6 user experience, the requirements for internal

7 Facebook developers, and business case and

```

8 | definition for products built by Facebook.

```

9 Q. And what products have you managed at

10	Facebook?	10:11:14
----	-----------	----------

11 A. I have worked in privacy the entire time.

12	Q. And is privacy a product at Facebook?
----	--

13 A. The -- there is a privacy organization

14 and there are privacy-related products that are

15	part of that.	10:11:33
----	---------------	----------

16	Q. And are there specific privacy-related
----	---

17 products that you have focused on in your

18 | employment at Facebook?

19 A. Yes. Currently, I support the org. I

20 take care of the privacy infrastructure teams. 10:11:46

21 Q. And what is privacy infrastructure?

22 | A. Yeah. Privacy infrastructure is where we

23	build centralized infrastructure to enable Facebook
----	---

24 internal developers to have common central

25	solutions to solve for privacy. That might include	10:12:08
----	--	----------

1 deletion. Also includes retention, data 10:12:14
2 minimization, purpose limitation, scraping,
3 anti-scraping efforts as well.

4 Q. And who heads the privacy infrastructure
5 team? 10:12:36

6 A. Could you be more -- the product
7 organization or the product team or the -- there --
8 there are multiple -- there are multiple roles
9 associated with privacy infrastructure. I lead the
10 product management of privacy infrastructure. 10:12:56

11 Q. Understood. And I'll put a pause on
12 that. Thank you for answering that question.

13 Do you understand today that you are
14 testifying on behalf of Facebook as a corporate
15 representative? 10:13:09

16 A. Yes, I do.

17 Q. And have you seen the deposition notice
18 in this case?

19 A. I have.

20 Q. Okay. And you're here to testify with 10:13:16
21 regard to topic 4; is that correct?

22 A. That is correct.

23 Q. Do you understand that topic 4 is
24 Facebook's processes of pseudonymization,
25 de-identification, re-identification, association, 10:13:30

1 and deletion of user data and information; is that 10:13:34
2 your understanding?
3 A. That is my understanding.
4 Q. Okay. And have been deposed before,
5 Mr. Clark? 10:13:46
6 A. I have.
7 Q. How many occasions have you been deposed?
8 A. A total of seven.
9 Q. Have all of those depositions been in
10 connection with your employment at Facebook? 10:13:54
11 A. No. No, they have not.
12 Q. To what, in general, did all seven
13 depositions relate?
14 A. One was related to a car accident that I
15 was a passenger in as a teenager. The second were 10:14:08
16 telecommunications company I worked for were
17 disputes around billing and access rights to
18 physical infrastructure.
19 And then the other four have been at
20 Facebook. 10:14:32
21 Q. And in what matters have you been deposed
22 as part of your employment at Facebook?
23 A. I've been deposed on matters relating to
24 the anti-scraping efforts and enforcement that we
25 had taken, in three of the four depositions. 10:14:54

1 Q. And what was the fourth deposition? 10:14:56

2 A. The -- the fourth deposition was
3 talking -- it was -- it was a deposition with the
4 FTC, specifically about [REDACTED]

5 Q. And when you say "about [REDACTED] what 10:15:11
6 do you mean?

7 A. About [REDACTED]

8 [REDACTED]

9 Q. And when was that deposition?

10 A. That was November or December of last 10:15:26
11 year.

12 Q. And what was the subject matter of your
13 testimony in that deposition, in general?

14 A. Specifically, it was about [REDACTED]

15 [REDACTED] 10:15:42

16 Q. And what did you discuss in that
17 deposition as subject matter, specifically?

18 MR. BLUME: Object -- objection. Scope,
19 generally.

20 THE DEPONENT: The -- it was -- it was 10:15:57
21 specifically about the assessment and my -- and --
22 and the role of privacy infrastructure in the
23 broader assessment.

24 Q. (By Ms. Weaver) And what specific
25 privacy infrastructure were you testifying about? 10:16:17

1	A. I -- it was controls and safeguards	10:16:21
---	--	----------

2 associated with privacy infrastructure.

3 Q. Did it include anonymization or

4 pseudonymization of data?

5 A. It did not include anonymization or 10:16:35

6 pseudonymization.

7	Q. What did it include?
---	-------------------------

8 A. It included the broader controls and

9 safeguards associated.

10	Q. And what controls and safeguards,	10:16:47
----	--------------------------------------	----------

11 specifically, if not anonymization and

12 | pseudonymization?

13 MR. BLUME: Objection. Scope, generally.

14 THE DEPONENT: It included the broader

```
15 | set of safeguards that include data life cycle | 10:17:03
```

16 management. That included scraping and TPM.

17 Q. (By Ms. Weaver) When you say "data life

18 cycle management," does that include data deletion?

19 A. That does include data deletion.

20	Q. What else does data life cycle management	10:17:24
----	--	----------

21	include?
----	----------

22 A. Data retention.

23 Q. Anything else?

24	A.	No.
----	----	-----

25	O. Okay.	10:17:38
----	----------	----------

1 A. The deal same safeguards are those two. 10:17:39

2 Q. And how long was your deposition in that
3 matter, do you recall?

4 A. Approximately four hours.

5 Q. And I apologize. I'm sure you told me, 10:18:04
6 but when did that deposition occur?

7 A. I don't remember the exact date. It was
8 either November or December of last year.

9 Q. Thanks very much.

10 Well, you're very good, as far as I can 10:18:16
11 tell, at depositions so far. Especially insofar as
12 we are communicating clearly and in a way that the
13 court reporter can take down.

14 And so I appreciate that. Thank you.

15 And the general rules of the road you 10:18:29

16 seem to know, which is, please allow me to finish

17 my question before you answer. And I will endeavor

18 to not interrupt you and allow you to finish your

19 answers before I speak; is that fair?

20	A. That is fair.	10:18:45
----	------------------	----------

21 Q. Okay. And answers need to be verbal, yes
22 or no. For purposes of the record, nodding will
23 not accomplish what we need to accomplish here
24 today in terms of creating a transcript; is that
25 fair?

1	A. That is fair.	10:18:58
---	------------------	----------

2 Q. Okay. If you answer my question, I'm
3 going to assume that you understood what I was
4 asking; is that fair?

5	A. That is fair.	10:19:08
---	------------------	----------

6 Q. Okay. What did you do to prepare for
7 your deposition today?

8 A. I reviewed materials and had interviews
9 with individuals, with counsel.

10	Q. With whom did you have interviews?	10:19:25
----	---------------------------------------	----------

11 A. I spoke with Scott Renfro.
12 Yiannis Papagiannis. P-A-P-A-G-I-A-N-N-I-S is how
13 you spell the last name.

14	Mayur Patel. Eugene Zarashaw,	
15	Z-A-R-A-S-H-A-W. Ryan Borker, B-O-R-K-E-R.	10:19:48

16 Will Shackleton, S-H-A-C-K-L-E-T-O-N. And
17 Hannes Roth. H-A-N-N-E-S and then R-O-T-H.

18	Q. Anyone else?
----	-----------------

19	A.	No.
----	----	-----

20 Q. When you spoke with those seven 10:20:25
21 individuals, was counsel present for each
22 conversation?

23	A. Yes.
----	---------

24 Q. And how long did you speak with each of

25 them? 10:20:31

1 A. I -- I don't have exactly how much time I 10:20:36
2 spent with them. Between those interviews and
3 counsel, approximately 35 hours.

4 Q. And what did you discuss with Mr. Renfro?

5 A. I discussed some of the historical and -- 10:20:59
6 and past functionality of the deletion framework.

7 Q. And when you say the "deletion
8 framework," what are you referring to?

9 A. Software related to deletion
10 functionality at Facebook. 10:21:19

11 Q. Thank you.

12 Mr. Renfro is currently an employee, is
13 that right, of Facebook?

14 A. That is correct.

15 Q. And what is his title? 10:21:28

16 A. Yes.

17 I do not know his title.

18 Q. Do you know what his current role is?

19 A. His -- I -- I actually don't know his
20 exact role or title. 10:21:47

21 Q. Do you know his --

22 A. He's a -- he's a -- his past role is as a
23 software engineer. I don't know what his current
24 title or role.

25 Q. How long did you speak with Mr. Renfro? 10:21:59

1 A. I did not keep an exact accounting of the 10:22:01
2 amount of time I spoke with Mr. Renfro.
3 Potentially an hour.

4 Q. Okay. Well, so as not to be too
5 exhausting, can you give me a rough estimate, for 10:22:13
6 each of the seven individuals you named, how
7 many -- how much time you spent talking to each of
8 them and generally what the subject matter was?

9 A. Sure.

10 For Yiannis Papagiannis, a total of 10:22:29
11 roughly an hour. Spoke to Yiannis about current
12 deletion software functionality. And his
13 experience in learnings and observations from the
14 time that he's been here, which was longer than
15 myself. Yiannis's title is an engineering manager. 10:22:55

16 Mayur Patel, probably spent a total of an
17 hour and a half with, discussing questions that I
18 had regarding some of the technical functionality
19 of some of the systems and current processes for
20 how they operate, roughly -- and Mayur is a 10:23:41
21 software engineer.

22 Eugene, probably 30 minutes, if even
23 that, and was for historical context on past
24 functionality of deletion software. Eugene is
25 formerly a software engineer. I do not know his 10:24:14

1 current title. 10:24:16

2 Ryan Borker was also around between
3 15 minutes and a half hour. And spoke with Ryan
4 about schematization. And Ryan is a product
5 manager. 10:24:46

6 Will Shackleton, spent about 20 minutes
7 with, and spoke to -- about past versions of
8 deletion software. And spoke to Will for a
9 half hour.

10 And Hannes was also between 15 minutes 10:25:25
11 and a half hour. And spoke to about schematization
12 as well. And Hannes is a software engineer.

13 Q. And what is schematization?

14 A. Schematization is a process of
15 classifying data storage systems. 10:25:48

16 Q. And what is, in general, Facebook's
17 schematization in this case, particularly as
18 relevant to the topics you discussed with people in
19 preparation for this deposition?

20 A. Specifically, the deletion framework, the 10:26:09
21 software that operates deletion at Facebook. The
22 simple deletion framework uses [REDACTED]

23 [REDACTED] to
24 delete data on those systems.

25 Q. Got it. 10:26:33

1 So to recap briefly, you spoke with 10:26:34
2 Mr. Renfro for about an hour. Mr. Papagiannis for
3 about an hour. Mr. Patel for about an hour and a
4 half. We're at about three and a half.

5 Then Mr. Zarashaw for about 30 minutes. 10:26:50
6 And let's say 30 minutes for the -- each for the
7 remaining four, so that's two -- so you spent about
8 seven hours substantively preparing for this
9 deposition. And then you said you spent 35 hours
10 preparing. 10:27:05

11 Was the remainder of the time spent
12 talking to counsel?

13 A. Yes, in addition to 20 of -- hours of my
14 own time reviewing material.

15 Q. And what materials did you review for 10:27:14
16 20 hours?

17 A. Yeah. I -- I reviewed approximately
18 45 documents. The UDDP. The relevant deletion
19 controls from 2012 to present. PwC's audits from
20 2013 to 200- -- I believe '17. Wiki's describing 10:27:33
21 the technical details of deletion and the software
22 associated with. And then also reviewed the
23 25 documents which you had provided.

24 Q. And when you say you reviewed PwC's
25 audits, what specifically are you referring to? 10:27:56

1 A. There were audits of the controls in that 10:28:04
2 time frame, and it was the -- at that time the
3 third-party assessment of those controls associated
4 with the 2012 FTC order.

5 Q. What was the focus of PwC's audit during 10:28:21
6 that time frame?

7 MR. BLUME: Objection. Scope.

8 THE DEPONENT: Yeah, I can only speak to
9 what I observed in -- in reading, which was the --
10 the privacy controls. 10:28:39

11 Q. (By Ms. Weaver) And when you say the
12 "privacy controls," what do you mean, specifically?

13 A. There were controls that were identified
14 that -- which I had reviewed from 2012 to present,
15 and it was the audit of those controls. 10:28:57

16 Q. Right.

17 And which controls specifically are you
18 referring to?

19 A. Controls associated with deletion.

20 Q. Anything else? 10:29:11

21 A. Focused primarily on the controls
22 associated with deletion.

23 Q. What's your understanding of why PwC
24 focused an audit on privacy controls relating to
25 deletion? 10:29:28

1 MR. BLUME: Objection. Scope. And 10:29:29
2 privilege.

3 So to the extent you know by speaking to
4 counsel, I'd instruct you not to answer.

5 THE DEPONENT: I don't know that I 10:29:39
6 understand the question.

7 Q. (By Ms. Weaver) Sure.

8 You said you spent 20 hours reviewing
9 documents, including PwC's audits.

10 And then you testified that the focus of 10:29:48
11 the PwC audits, with regard to privacy controls,
12 were controls associated with deletion; is that
13 correct?

14 A. I -- just to clarify. I didn't just
15 spend 20 hours on the PwC. Those were -- those 10:30:01
16 were some of the documents in that time.

17 Q. Right.

18 And I'm asking you, having read those PwC
19 audits, what did you --

20 A. Yes. 10:30:11

21 Q. -- learn from those documents relating to
22 why PwC was auditing Facebook's privacy controls
23 associated with deletion?

24 A. They were auditing, as part of the
25 requirements associated -- as I understand, and 10:30:26

1 from what I read, associated with the 2012 FTC 10:30:29

2 order.

3 Q. And when you say the "2012 FTC order,"
4 what are you referring to?

5 A. I don't know how else to label that. 10:30:41

6 The -- the FTC agreement between Facebook and the
7 FTC in 2012.

8 Q. And what did the agreement relate to, in
9 your understanding?

10 A. In -- in my understanding and review of 10:30:52
11 it, agreements to privacy practices and for those
12 privacy practices to be audited.

13 Q. And specifically, with regard to the
14 controls associated with deletion, what is your
15 understanding, based on your review and preparation 10:31:11
16 for this deposition, of what the -- what PwC was
17 focused on?

18 MR. BLUME: Objection. Scope.

19 THE DEPONENT: To the best of my
20 understanding, the area that I reviewed was their 10:31:25
21 observations associated with controls associated
22 with deletion.

23 Q. (By Ms. Weaver) What were those
24 observations?

25 A. I would actually want to pull those up so 10:31:36

Page 29

1 that I could speak to them directly -- 10:31:39

2 Q. Which documents --

3 (Simultaneously speaking.)

4 THE DEPONENT: -- if you'd like to go

```
5 | through this --                                10:31:43
```

6 Q. (By Ms. Weaver) I -- I -- I understand.

7 But I'm entitled to your recollection. And you've

8 said now you looked at them for 20 hours in

9 association with other documents.

10	What's your understanding, as you sit	10:31:50
----	---------------------------------------	----------

11 here today, as Facebook's corporate representative,

12 of the privacy controls associated with deletion

13 that PwC was investigating?

14 MR. BLUME: Object to form.

15 THE DEPONENT: I did -- 10:32:02

16 MR. BLUME: Hold on.

17 THE DEPONENT: Sorry.

18 MR. BLUME: Objection. Form and scope.

19 THE DEPONENT: I -- I do want to clarify.

20	I didn't spend 20 hours reading the PwC	10:32:07
----	---	----------

21 documents. I just want to make sure that that's

22	accurate.
----	-----------

23 For the time that I did spend reading

24 | them, one that comes directly to mind would be the

25 | 2017 audit, where specifically, as I refer to my 10:32:18

1 notes, where the -- found -- PwC found no issues 10:32:24
2 relating to deletion on Facebook.

3 And the 2017 to 2019 also finds no issues
4 relating to deletion on Facebook that -- yeah, I
5 mean -- those -- those were at very high levels 10:32:53
6 what I -- those are what I remember from
7 recollection.

8 If we go back further to 2013, where PwC
9 was testing privacy controls, also found no
10 deletion -- no issues relating to deletion. 10:33:07

11 In the 2013 to 2015 audit, as well, also
12 identified no direct issues relating to deletion on
13 Facebook.

14 Q. (By Ms. Weaver) And you appear to be
15 reading from a document; is that right, Mr. Clark? 10:33:25

16 A. Yup. As I mentioned, I -- I was looking
17 at my notes.

18 Q. And what are these notes?

19 A. These were notes that I handwrote just
20 because of the timeline that I needed to cover and 10:33:36
21 to make sure that I just have something to refresh
22 my recollection.

23 Q. When did you create these notes?

24 A. Last night.

25 MS. WEAVER: We would request immediate 10:33:49

1 production of them, Counsel. 10:33:50

2 Q. (By Ms. Weaver) And had you taken any

3 notes that are incorporated in what you're

4 reviewing before last night?

5 A. In -- no. 10:34:03

6 Q. Did anybody assist you in the preparation

7 of these notes?

8 A. No. I typed them myself.

9 Q. And when you typed them, were you looking

10 at handwritten notes? 10:34:12

11 A. No, I was not. I typed -- I typed them

12 up from the 45 documents and 25 documents -- 45

13 documents, and then the 25 provided by you to -- to

14 create and generate these notes.

15 MS. WEAVER: Okay. Mr. Blume, will you 10:34:33

16 produce those as soon as possible, please.

17 MR. BLUME: We will.

18 MS. WEAVER: I mean, we can take a break.

19 You're sitting in the room with him. So why don't

20 we take a break and you can have them copied and 10:34:43

21 then we'll take a look.

22 Go off the record.

23 THE VIDEOGRAPHER: Off the record. It's

24 10:34 a.m.

25 (Recess taken.) 10:34:52

1 THE VIDEOGRAPHER: Okay. We're back on 10:53:53
2 the record. It's 10:53 a.m.

3 MR. BLUME: I'm sorry. If I could just
4 note, we produced what's been Bates-labeled -- this
5 is Rob Blume -- ADVANCE-META -- a document -60 to 10:54:04
6 -65.

7 It's Facebook's position that those notes
8 are not obligated to be produced at this time,
9 although we did so out of courtesy to Ms. Weaver.

10 MS. WEAVER: Duly noted and appreciated. 10:54:22

11 And I've taken just a quick moment here
12 to review the notes, which we will mark as
13 Exhibit 1 [sic], when Mr. Samra has a moment here.
14 I do think they will facilitate the taking of the
15 deposition. So we'll mark those for now and just 10:54:39
16 set them aside.

17 (Exhibit 339 was marked for
18 identification by the court reporter and is
19 attached hereto.)

20 Q. (By Ms. Weaver) Mr. Clark, what is your 10:54:52
21 understanding of what the word "pseudonymization"
22 means?

23 A. Are we back on the record?

24 Q. Yes.

25 A. Okay. 10:55:02

1 Q. Sorry. We're back on the record and 10:55:03
2 you're under oath.

3 I'll ask the question again.

4 Mr. Clark, what's your understanding of
5 the -- what the word "pseudonymization" means? 10:55:12

6 A. The term "pseudonymization" is a term
7 where its -- its -- its technical meaning is to
8 create an additional identity from a source
9 identity.

10 Specifically, in the case that we are 10:55:33
11 talking about here, pseudo- -- pseudonymization
12 practices at Facebook is, we have the Facebook user
13 ID that is the canonical user ID. And the process
14 of [REDACTED]

15 [REDACTED] 10:55:55

16 Q. And when you say "identifier," what do
17 you mean?

18 A. Identifier can have a broad set of
19 meaning. In -- in this case -- in -- in the -- in
20 the pseudonymization example that I was just 10:56:10
21 speaking of, an identifier is -- it's -- it's
22 something to -- a number or some kind of technical
23 concept to [REDACTED]

24 [REDACTED]
25 In the case of the canonical user 10:56:33

1 identifier, their Facebook user ID that I -- that I 10:56:35
2 mentioned, that's to [REDACTED]
3 [REDACTED]
4 Q. And when you say "Facebook user ID," is
5 that -- written in a shorthand at Facebook? 10:56:50
6 A. I -- I apologize. One word broke out
7 when you asked that question. Can you repeat that.
8 Q. No problem.
9 How does Facebook refer to the Facebook
10 user ID? 10:57:05
11 A. The Facebook user ID, which is an
12 internal use, it's for internal Facebook developers
13 only to use. We refer to it as the canonical user
14 identifier.
15 Q. And is it [REDACTED] Is it expressed [REDACTED] 10:57:23
16 ordinarily?
17 A. It -- it can be expressed [REDACTED], yes.
18 Q. Are there other ways to refer to it?
19 MR. BLUME: Objection. Form.
20 THE DEPONENT: User ID. Facebook user 10:57:36
21 ID.
22 Q. (By Ms. Weaver) Any other way?
23 A. Those -- those are the ones that I know
24 of offhand.
25 Q. So -- apologies. 10:57:48

1 So [REDACTED] and UID the same thing? 10:57:51

2 A. [REDACTED]

3 [REDACTED]

4 Q. And what other identifiers are you aware
5 of in use at Facebook that are used for processes 10:58:07
6 of pseudonymization?

7 A. Purely for the sake of pseudonymization,
8 I would -- one example would be the [REDACTED]

9 [REDACTED]

10 [REDACTED]

[REDACTED]

11 [REDACTED]

12 [REDACTED]

13 [REDACTED]

14 [REDACTED]

15 [REDACTED]

[REDACTED]

16 [REDACTED] So that at

17 any point if the user deletes their account, that

18 [REDACTED]

19 Q. And then --

20 A. That's one example. 10:59:13

21 Q. And then the [REDACTED]

22 [REDACTED]

23 MR. BLUME: Objection. Form.

24 THE DEPONENT: Could you ask that more

25 specifically. 10:59:28

1 Q. (By Ms. Weaver) I'm just asking, is the 10:59:30

2 [REDACTED]

3 A. Specifically, inside of Hive, [REDACTED]

4 [REDACTED] And that is while the user

5 account is active and the data exists. That is tie 10:59:51

6 [REDACTED] in the data

7 warehouse.

8 Q. And when you say "[REDACTED]"

9 [REDACTED] do you mean [REDACTED]

10 [REDACTED] 11:00:05

11 MR. BLUME: Objection. Form.

12 THE DEPONENT: The -- I'm -- I'm trying

13 to figure out the right way to answer that question

14 because it's -- it -- it -- in a data warehouse,

15 you have unstructured data that might be a log, for 11:00:29

16 instance. And if there was a user ID in that log

17 entry, [REDACTED] [REDACTED]

18 [REDACTED] while the account

19 is active and before -- and while the data still

20 lives on the system [REDACTED] [REDACTED]

21 [REDACTED]

22 Q. (By Ms. Weaver) Perfect. Thank you.

23 What does the word de-identification

24 mean?

25 A. De-identification is the process of 11:01:23

1 taking and stripping identity from -- 11:01:30
2 generically -- generic technical definition is, is
3 taking any identifiers or stripping any identifiers
4 out of a set of data so it's not identifiable.

5 Q. And what is re-identification? 11:01:50

6 A. Re-identification is a process that --
7 using the generic technical definition -- where a
8 set of data that while not directly identifiable,
9 there is some process by which data can be tied
10 back to some original identity. 11:02:14

11 Q. Great.

12 And what about association in this
13 context?

14 MR. BLUME: Objection. Form.

15 THE DEPONENT: Association and -- as you 11:02:29
16 say in this context, can you clarify what you mean.

17 Q. (By Ms. Weaver) Sure.

18 Topic 4, to which -- for which you're the
19 corporate representative, seeks information about
20 Facebook's processes of a number of things, 11:02:42
21 including association of user data and information.

22 In that context, what does association
23 mean?

24 A. Thank you.

25 Q. Sure. 11:02:54

1 A. The word "association" in that context is 11:02:54
2 how -- I -- I asked the question because
3 association has specific technical meaning in
4 Facebook's systems, in addition to the generic
5 technical use of the word is where data can be 11:03:07
6 associated or identified back to an original user
7 identifier.

8 Q. Okay. And then what does deletion mean,
9 as you understand it, with regard to topic 4?

10 A. Deletion, as I understand it, in regards 11:03:37
11 to topic 4 is the -- the Facebook processes by
12 which we -- when a user requests an individual
13 object or their accounts to be deleted, that --
14 that their -- that the obligations of that deletion
15 are met. 11:03:58

16 Q. When data is deleted at Facebook, does
17 that mean it no longer exists or can it also mean
18 that the associations or identifications no longer
19 connect a user to the data?

20 MR. BLUME: Objection. Form. 11:04:25

21 THE DEPONENT: Can -- that felt like a
22 couple of questions.

23 Can you -- can you be more specific.

24 Q. (By Ms. Weaver) Yeah. I'm actually just
25 trying to lay it out so you can see where I'm 11:04:34

1 headed. 11:04:37

2 A. Okay.

3 Q. So does deletion at Facebook mean the
4 data no longer exists?

5 A. When data is deleted at Facebook, the -- 11:04:45
6 the data itself is gone or is no longer
7 identifiable in any way back to the user.

8 Q. So sometimes deletion could mean that the
9 data still exists. But the way to identify or
10 associate data with a user has just been 11:05:07
11 eliminated; is that fair?

12 MR. BLUME: Objection. Form.

13 THE DEPONENT: I [REDACTED]
[REDACTED]

15 Q. (By Ms. Weaver) Why not? 11:05:19

16 A. [REDACTED]
[REDACTED] [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] [REDACTED]
[REDACTED]

22 If there is a log entry that includes --
23 I'll use my own name as an example -- that includes
24 my own user identifier, when it's first uploaded,
25 my IP address, maybe some device information, 11:05:54

1 things that would be necessary for the normal 11:05:58
2 operation and debugging of any issues that might
3 have popped up, and that there was a photo uploaded
4 and what that photo was, [REDACTED]

■ [REDACTED] [REDACTED]

■ [REDACTED]

■ [REDACTED]

■ [REDACTED]

■ [REDACTED] because the photo would also be gone if I

10 deleted my account, and any of the associated 11:06:26
11 information like IP address or device information
12 would also be gone.

13 Q. When the data still exists somewhere in,
14 say, a table or a data source, is there an
15 associated general descriptor of, for example, this 11:06:42
16 is data from 2007 from Facebook users, in general?

17 MR. BLUME: Objection. Form. Objection.
18 Form.

19 THE DEPONENT: In form I -- I -- I don't
20 know that I would agree with exactly how that would 11:07:03
21 state.

22 Like in the example I used, it would be
23 photo upload logs. But the 2007 would be past
24 retention periods, and so I wouldn't expect, per
25 our policies, for that to exist. 11:07:18

Page 41

1 Q. (By Ms. Weaver) Let me do this. Let's 11:07:30
2 keep walking through our definitions, and I'm going
3 to come back to this issue when I think we have a
4 better way to communicate about it.

5 The first question is, did you refer to 11:07:37
6 that data that's not associated -- that still
7 physically exists, but it is not associated, is
8 there a different way to refer to that than just
9 deleted data?

10 MR. BLUME: Objection. Form. 11:07:58

11 THE DEPONENT: Yeah, I -- that -- that
12 data is de-identified.

13 MS. WEAVER: Okay. Perfect. That's what
14 I was hoping for.

15 I'll ask you to now turn to 11:08:21
16 Exhibit Share. And we've marked a couple of
17 exhibits while -- and when I say "we," Josh Samra
18 has marked a couple of exhibits while we were
19 chatting, and I believe it's Exhibit 339.

20 Q. (By Ms. Weaver) And do you know, 11:08:40
21 Mr. Clark, about how you have to kind of refresh
22 Exhibit Share to have exhibits show up?

23 A. Let me see how I can make that work.

24 Q. Okay.

25 A. I think I've got it right here. 11:08:50

1 Could you repeat for me the exhibit 11:08:52
2 number.
3 Q. Yes. It's 339.
4 I see, though, it starts with an
5 Exhibit 1. You should disregard that. That was 11:08:57
6 done in error at my instruction, and we will remove
7 it from the file.
8 A. I'm waiting for it load.
9 MS. WEAVER: Okay. And, actually, you'll
10 see there are two exhibits while we're waiting. 11:09:10
11 For the record, Exhibit 339 is a copy of
12 the document just produced by Facebook bearing
13 Bates numbers ADVANCED-META-60 through -65, and
14 bearing the words "Mike Clark Deposition Notes."
15 (Exhibit 340 was marked for 11:09:30
16 identification by the court reporter and is
17 attached hereto.)
18 MS. WEAVER: And Exhibit 340 is a
19 document bearing Bates numbers ADVANCED-META-43
20 through -56, and bearing the words "User Data 11:09:39
21 Deletion Policy."
22 Q. (By Ms. Weaver) Let me know when you
23 have them up, Mr. Clark.
24 A. Okay.
25 Which one would like me to look at first? 11:09:58

1 Q. Why don't you look at 339, and let's just 11:10:01
2 identify it for the record.

3 A. Okay.

4 Q. In the informal way, not the data way.

5 A. This appears to be the notes that I typed 11:10:20
6 up, which I have physically in front of me as well.

7 Q. And what was the basis for these notes?

8 A. I had a lot of documents that I reviewed
9 and wanted to be able to keep the timeline straight
10 in my head for what happened when. 11:10:39

11 Q. And do you have a list of the notes that
12 you relied upon when you drafted these notes -- I'm
13 sorry. Strike that and I'll restate it.

14 Do you have a list of the documents that
15 you relied upon in drafting these notes? 11:10:52

16 A. I -- these were documents provided by
17 counsel, for instance, the UDDP. The deletion
18 controls from 2012. The PwC audits. Number of
19 Wikis.

20 As -- as it says right here, like 11:11:17
21 these are -- these are examples of -- of what I
22 pulled this from.

23 Q. And you physically possessed those
24 documents at the time you were writing these notes;
25 is that right? 11:11:27

1 A. Yes. 11:11:27

2 Q. And do you still have them?

3 A. Not right in front of me, but I do have
4 them.

5 Q. Okay. And you could prepare a list of 11:11:31
6 them, correct?

7 A. Correct.

8 Q. Okay. And do you believe that these
9 notes are true and accurate, to the best of your
10 knowledge, based on the documents that you 11:11:43
11 reviewed?

12 MR. BLUME: Objection. Form.

13 THE DEPONENT: They were only notes. And
14 based on what I had, I believe them to be true.

15 Q. (By Ms. Weaver) Okay. Let's go look at 11:11:54
16 Exhibit 340.

17 A. I am opening it and waiting for it to
18 load.

19 I am looking through the document. I
20 don't know if this is an error. This appears to be 11:12:47
21 two different documents.

22 There is the UDD_ -- UDDP, or the user
23 data deletion policy, which comes from the internal
24 Facebook policies. And then it appears the last
25 three pages look like a spreadsheet of control 11:13:11

1 objectives and safeguards associated with deletion. 11:13:13

2 Q. Okay. Have you seen both of these
3 documents before?

4 A. I -- I have seen both of these documents
5 before. 11:13:27

6 Q. Okay. This was how it was produced to
7 us. So we didn't know that they were, in fact,
8 separate documents. And I think what we will do is
9 re-mark them and we will end Exhibit 340 at
10 Bates number 53, and then we will re-mark as 11:13:47
11 Exhibit 341, the document beginning with
12 Bates number -54 through -59.

13 (Exhibit 341 was marked for
14 identification by the court reporter and is
15 attached hereto.) 11:13:57

16 MS. WEAVER: No objection from opposing
17 counsel, if we do so?

18 MR. BLUME: No objection.

19 MS. WEAVER: Okay. So Josh -- Mr. Samra,
20 maybe you could work on that. 11:14:09

21 Q. (By Ms. Weaver) In the meantime, if
22 there's no objection, we'll just take testimony on
23 the documents and re-mark them later?

24 MR. BLUME: That's fine.

25 Q. (By Ms. Weaver) Okay. Looking at the 11:14:18

1 first page of Exhibit 340, Mr. Clark, what -- what 11:14:19
2 is this document?

3 A. This appears to be the user -- the
4 internal Facebook user data deletion policy,
5 effective October 23, 2020. 11:14:40

6 Q. And is it in effect today?

7 A. Yes.

8 Q. And have you seen the policy that was in
9 effect prior to October 23, 2020?

10 A. I reviewed the controls and Wiki pages 11:14:55
11 prior to that, and the privacy policies prior to
12 that.

13 Q. Was there a document similar in scope and
14 purpose to user data deletion policy at
15 Exhibit 340, prior to October 23, 2020? 11:15:13

16 MR. BLUME: Objection. Form.

17 THE DEPONENT: The mix of controls and
18 deletion Wiki pages were the -- the prior version
19 of this, between what's found in our external
20 facing policy, in addition to our internal pages, 11:15:36
21 plus the controls, the combination of those.

22 Q. (By Ms. Weaver) Currently, how does the
23 external facing and the internal facing policy
24 differ from one another?

25 MR. BLUME: Objection. Form. 11:15:53

Page 47

1 THE DEPONENT: The internal policy 11:15:56
2 provides details for how internal Facebook
3 developers -- what -- what the requirements are as
4 part of the overall privacy program, [REDACTED]

■ [REDACTED] [REDACTED]

■ [REDACTED]

■ [REDACTED]

8 Q. (By Ms. Weaver) And do you see, at the
9 first page of Exhibit 340, a reference to "User
10 Data" in the header? 11:16:41

11 A. Where -- and apologies.

12 Do you mean where it says "7/7/2021" and
13 then "User Data Deletion Policy"?

14 Q. Yes. That's one of the places.

15 A. Okay. 11:17:02

16 Q. And then a little bit lower, do you see
17 where it says we -- [REDACTED]

■ [REDACTED]

■ [REDACTED]

20 Do you see that? 11:17:13

21 A. I do.

22 Q. What's your understanding of what user
23 data means?

24 A. User data is -- is information that the
25 user has provided, so user-generated content. In 11:17:32

Page 48

1 addition to information that is about and 11:17:36
2 associated with the user.

3 Q. And when you say "In addition to
4 information that is about and associated with the
5 user," can you be more specific, providing examples 11:17:53
6 of what you mean?

7 A. I -- I will give an example.

8 I -- I believe an example of it might be
9 a photo that I posted to my profile. The
10 user-generated content is the photo that I've 11:18:07
11 provided and any word that I've provided describing
12 it.

13 In addition to user data, associated
14 would -- would also include the likes or reactions
15 to that photo. The comments associated with that 11:18:22
16 photo. And the -- and the associated log entry
17 that I've uploaded that photo would be -- those
18 would be a series of example.

19 Q. Does it include metadata?

20 MR. BLUME: Objection. Form. 11:18:46

21 THE DEPONENT: The -- the log entry would
22 be an example of metadata.

23 Q. (By Ms. Weaver) Is an example of
24 metadata also, for example, location information?

25 A. Yeah. If I tagged the photo as -- if I 11:18:59

1 provided a location in that photo, yes. 11:19:03

2 Q. Are privacy settings metadata that is
3 also associated with user data?

4 MR. BLUME: Hold on.

5 Objection. Form. 11:19:26

6 THE DEPONENT: I -- could you be more
7 specific. That's -- that's a very broad...

8 Q. (By Ms. Weaver) Yes, I can.

9 If a user posts a photo, using your
10 example, but posts it not publicly, is there a 11:19:34
11 metadata field associated with the photo?

12 A. There is -- I -- I -- I don't know if I'd
13 call that metadata, but there is -- there is an
14 association -- would be the technical term the --
15 to what that audience control setting was for that 11:19:52
16 photo.

17 Q. And does that association have a name?

18 Is it called a privacy setting or a...

19 MR. BLUME: Objection.

20 THE DEPONENT: I -- I'd refer to it as 11:20:09
21 audience control, specifically, as -- as what that
22 setting would be.

23 Association is -- or ASSOC, A-S-S-O-C,
24 which is short for association -- is the
25 association itself of -- of the log entry or the 11:20:26

1 audience control back to that photo. 11:20:32

2 Q. (By Ms. Weaver) And if a user posts a
3 photo publicly, is there an ASSOC file that people
4 externally can see?

5 MR. BLUME: Objection. Form. 11:20:48

6 THE DEPONENT: Can you tell me what you
7 mean by "see"?

8 Q. (By Ms. Weaver) Is there a way for
9 anyone to be able to determine, by looking at a
10 file and its associated data, that a photo was 11:21:05
11 publicly posted on someone's wall?

12 A. While I didn't prepare for that
13 specifically as part of this testimony and --
14 and -- and role as a company representative, but
15 speaking from personal experience, that is 11:21:28
16 represented on -- on every photo and post. There
17 is a -- there is both an icon and a link for how --
18 whether it is public or whether it's friends only,
19 or what that audience control might be.

20 Q. And Facebook maintains that information 11:21:44
21 in association with the object; is that right?

22 MR. BLUME: Objection. Form. Scope.

23 THE DEPONENT: In order -- as -- as part
24 of the apps's functionality, yes, that would --
25 there would need to be an association. 11:22:07

1 Q. (By Ms. Weaver) Okay. And I will come 11:22:11
2 back to that.

3 Returning to Exhibit 340, could you
4 please turn to the page ending with

5 Bates number -50. 11:22:27

6 And do you know what I mean by
7 Bates number?

8 A. The number in the lower right-hand
9 corner?

10 Q. Yes. Perfect. 11:22:35

11 A. Okay. And just for clarity, 340 is the
12 UD -- is the user data deletion policy?

13 Q. Yes.

14 And you referred to it as the UDDP; is
15 that correct? 11:22:43

16 A. That is correct.

17 Q. So I'm -- I'll direct your attention to
18 where it says "[REDACTED]"

19 And do you see the first sentence where

20 it says "[REDACTED]" [REDACTED]

[REDACTED] [REDACTED]

[REDACTED] right?

23 A. Yes.

24 Q. And that's Facebook's policy, right?

25 A. That is Facebook's policy. 11:23:12

1 Q. And how long has that been Facebook's 11:23:13
2 policy?

3 A. That has been Facebook's policy for as
4 long as there has been [REDACTED]

■ [REDACTED] [REDACTED] [REDACTED]
■ [REDACTED]
■ [REDACTED]
■ [REDACTED]
■ [REDACTED]

10 Q. Why is that Facebook's policy? 11:23:44

11 MR. BLUME: Objection. Form. Scope.

12 THE DEPONENT: It is Facebook's policy

13 because [REDACTED]

■ [REDACTED]
■ [REDACTED] [REDACTED]
■ [REDACTED]

17 If it was -- it wouldn't be able to live
18 up to that obligation if we didn't have a -- if --
19 if it weren't a policy on top of both -- if it
20 weren't both technically infeasible, in addition to 11:24:16
21 being policy to not attempt to [REDACTED]

22 Q. (By Ms. Weaver) And how long has that
23 been Facebook's policy?

24 A. I'm temporally referring back to my
25 notes, so I can remember the timing. 11:24:38

1 The process that I was referring to, and 11:24:41
2 the process that's referred to -- part of the
3 process referred to that's in here is a process
4 [REDACTED] And that was
5 introduced to [REDACTED] [REDACTED]
6 [REDACTED]
7 [REDACTED] That was launched in 2011.
8 Q. So to your understanding, the data
9 deletion policy described in Exhibit 340 was in
10 effect from 2011 forward; is that right? 11:25:21
11 A. That --
12 MR. BLUME: Objection. Form.
13 THE DEPONENT: The technical components
14 of [REDACTED] have been in place since that time,
15 and it's my understanding that that was part of the 11:25:30
16 policy with that implementation as well.
17 (Exhibit 342 was marked for
18 identification by the court reporter and is
19 attached hereto.)
20 MS. WEAVER: Okay. I'll go ahead and 11:25:36
21 mark now tab 302, Josh -- actually, I think what we
22 will do next -- yeah, let's -- let's -- strike
23 that, Josh.
24 Let's mark tab 81.
25 And for the record, tab -- tab 81 bears 11:26:17

1 Bates number ADVANCE-META-1 to -2. 11:26:19

2 It bears the words at the top left-hand

3 page, "Data/Deleting Deleted Data - Facebook." And

4 it says "Last modified Wednesday, November 30, 2011

5 at 8:17pm by Adam Kramer." 11:26:36

6 Q. (By Ms. Weaver) And let me know when you

7 see Exhibit 342, Mr. Clark. I have it up.

8 A. I will refresh.

9 I have it now. Waiting for it to open.

10 I have it open. 11:27:39

11 Q. And when you have a moment to review it,

12 please just tell me, what is Exhibit 342.

13 Have you seen Exhibit 342 before,

14 Mr. Clark?

15 A. I have. 11:29:51

16 Q. And when did you last see it?

17 A. Read it over the weekend.

18 Q. Okay. And you're rereading it now?

19 A. Yup.

20 Okay. I've completed reading. 11:30:31

21 Q. What is Exhibit 342?

22 A. It is an internal Wiki page labeled

23 "Deleting Deleted Data," dated November 30th, 2011.

24 Q. And does it express what Facebook's

25 policy and practices were, as of its date, with 11:30:54

Page 55

1 regard to deleting deleted data? 11:30:57

2 MR. BLUME: Objection. Form.

3 THE DEPONENT: I can state what it

4 appears to be. It's not identified as a policy

5 specifically. 11:31:08

6 It looks like an engineer with very

```
7 | colorful writing wrote details about implementation
```

8 of deleting deleted data and how to -- how to

9 | handle it. I -- it doesn't identify itself as a

```
10 | policy.                                     11:31:36
```

11 Q. (By Ms. Weaver) I'm asking you, as

12 Facebook, if this was Facebook's policies and

13	procedures as of 2011?
----	------------------------

14 MR. BLUME: Objection. Form.

15 THE DEPONENT: It appears to be internal 11:31:53

16	Facebook developer documentation on working with
----	--

```
17 deleting deleted data.
```

18 Q. (By Ms. Weaver) And is there something

19 | about it you think is inaccurate?

20 MR. BLUME: Objection. Form. 11:32:06

21 THE DEPONENT: The only thing that I'm

22 stating is that it doesn't appear to identify

23 itself as a formal policy.

24 Q. (By Ms. Weaver) Okay. Does it -- well,

```
25 | looking at the -- the document itself, do you see      11:32:17
```

1 where it says "This wiki page explains what you 11:32:20

2 need to think about with respect to [REDACTED]

■

■

5 Do you see that?

11:32:31

6 A. I do see that.

7 Q. And -- and -- and then it says [REDACTED]

■

■

■

11:32:45

11 Do you see that?

12 A. I do see that sentence.

13 Q. What is [REDACTED]

14 A. I do not know.

15 Q. You're not familiar with a project called

11:32:58

16

17 A. I'm not familiar with a project called

18

19 Q. We'll return to that.

20 Do you see under [REDACTED]

■

■

■

■

25 Do you see that?

11:33:25

Page 57

1 A. I do see that sentence. 11:33:26

2 Q. Is that accurate?

3 MR. BLUME: Objection. Form.

4 THE DEPONENT: I agree with the first

5 sentence. The expression in the second sentence 11:33:42

6 is -- is the opinion of an engineer as opposed to

7 formal policy as the rationale for theirs, but...

8 Q. (By Ms. Weaver) Okay. Does Facebook let

9 a user choose who can see a post on Facebook,

10 whether it's a comment or a post or a photo? 11:34:05

11 A. Yes.

12 MR. BLUME: Objection. Form. Scope.

13 Q. (By Ms. Weaver) Looking at the next

14 sentence it says [REDACTED]

15 [REDACTED]

16 [REDACTED]

17 Do you see that?

18 A. I do see that.

19 Q. Do you agree with that?

20 MR. BLUME: Objection. Form. Scope. 11:34:31

21 THE DEPONENT: I -- in -- I would refer

22 back to the UDDDB [sic] where -- and -- and the

23 phrasing of that statement as formal policy, yes.

24 Q. (By Ms. Weaver) And the next sentence

25 says "[REDACTED]" 11:34:48

1

3

Do you see that sentence?

4

A. I do see that sentence.

5

Q. Okay. What does UDB mean?

11:35:05

6

A. I believe that is the user database.

7

Q. And how is that different from Hive?

8

MR. BLUME: Objection. Form. Scope.

9

THE DEPONENT: The UDB, which in the

10

modern version of how we named that would be called

11:35:28

11

TAO -- the objects and associations -- is the

12

online production storage systems that the

13

applications actually run from as opposed to Hive,

14

which is the data warehouse.

15

Q. (By Ms. Weaver) And what does "business

11:35:49

16

need" mean in this document?

17

MR. BLUME: Objection. Form. Scope.

18

THE DEPONENT: I don't know exactly what

19

business need was defined as in this document.

20

Q. (By Ms. Weaver) What's your

11:36:11

21

understanding, on behalf of Facebook, as to what

22

the business need is for Facebook

24

MR. BLUME: Objection. Form.

25

THE DEPONENT: The -- I -- I believe

11:36:26

Page 59

1 there's -- there's an example in the next sentence 11:36:29
2 that's provided that, [REDACTED]
3 [REDACTED]
4 [REDACTED] [REDACTED]
5 [REDACTED] [REDACTED]
6 [REDACTED]
7 [REDACTED]
8 [REDACTED]
9 Q. (By Ms. Weaver) Are you aware --
10 A. And another example -- 11:36:58
11 Q. Oh, I'm sorry.
12 Go ahead.
13 A. I'm just reading from the document.
14 Q. You were saying "Another example" ...
15 A. [REDACTED] [REDACTED]
16 [REDACTED] [REDACTED]
17 [REDACTED]
18 [REDACTED]
19 [REDACTED]
20 Q. And are you aware of a formal policy that 11:37:19
21 defined business need, as set forth in this
22 document?
23 MR. BLUME: Objection. Form. Scope.
24 THE DEPONENT: At this time of this
25 document, no. 11:37:33

1 Q. (By Ms. Weaver) And in the -- do you see 11:37:35

2 the paragraph below where it says "[REDACTED]

3 [REDACTED]

4 [REDACTED]

5 [REDACTED] [REDACTED] [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 Do you see that?

9 A. I do read that.

10 Q. Is it Facebook's policy that it only has 11:37:59

11 the obligation to delete user-generated content,

12 but not metadata or the context around UGC?

13 MR. BLUME: Objection. Form. Scope.

14 THE DEPONENT: Specifically, I would

15 refer to -- to -- to the question that you're 11:38:22

16 asking -- to the user data deletion policy back in

17 Exhibit 340, to what the policy is.

18 Q. (By Ms. Weaver) I -- I don't want you to

19 refer to a document. I'm trying to get your

20 testimony here. 11:38:40

21 So the question is, is it Facebook's

22 policy that Facebook only has the obligation to

23 delete user-generated content, but not metadata or

24 the content around UGC?

25 MR. BLUME: Objection. Form. Scope. 11:38:54

Page 61

1 THE DEPONENT: The reason I referred to 11:38:59
2 the other document is, when asked for policy, [REDACTED]
3 [REDACTED]
4 [REDACTED]
5 [REDACTED] 11:39:15
6 Q. (By Ms. Weaver) Does that include
7 metadata?
8 MR. BLUME: Objection. Form.
9 THE DEPONENT: It depends on where the
10 metadata is stored. [REDACTED] [REDACTED]
11 [REDACTED]
12 [REDACTED]
13 [REDACTED]
14 [REDACTED]
15 If it is part of the data warehouse [REDACTED] [REDACTED]
16 [REDACTED]
17 [REDACTED]
18 [REDACTED]
19 [REDACTED]
20 Q. (By Ms. Weaver) So that is de-identified 11:40:07
21 data; is that right?
22 A. That is correct.
23 Q. And you were specifically referring to
24 Exhibit 340, which is the policy in effect
25 October 23rd, 2020, and forward; is that right? 11:40:20

Page 62

1 A. That is -- that is the date of the last 11:40:26
2 update to that document.

3 Q. And looking back at Exhibit 342, is this
4 document correctly describing the policy that was
5 in effect at the time? 11:40:39

6 A. This document doesn't identify itself as
7 a policy at the time. It is an engineer's notes
8 on de- -- an internal Facebook engineer's notes on
9 deleting deleted data.

10 MS. WEAVER: Okay. Let's take a look -- 11:40:58
11 and we can refresh. I've marked another couple of
12 documents, and I'd like you to take a look at
13 Exhibit 344.

14	(Exhibit 344 was marked for	
15	identification by the court reporter and is	11:41:22
16	attached hereto.)	

17 THE DEPONENT: That was 344?

18 MS. WEAVER: Yes.

19 THE DEPONENT: Thank you.

20 MS. WEAVER: No, I skipped one. I'll go 11:41:32
21 back to it.

22 THE DEPONENT: For clarity, which
23 document am I supposed to look at?

24 MS. WEAVER: Exhibit 344.

25	THE DEPONENT: Oh.	11:42:10
----	-------------------	----------

1 MS. WEAVER: And for the record, 11:42:29
2 Exhibit 344 is one of the documents that plaintiffs
3 identified to Facebook in preparation for this
4 deposition over, I think, two weeks ago now. And
5 it bears Bates numbers PwC_CPUP_FB00007766 through 11:42:40
6 -68.

7 On the first page of Exhibit 344, it says
8 sent Monday February 11th, 2013, from Evan Eneman,
9 and there's a Facebook email address, to
10 Kelley K. Perng, P-E-R-N-G at us.pwc.com. 11:43:01

11 Q. (By Ms. Weaver) Let me know when you've
12 had an opportunity to review it, Mr. Clark.

13 A. I've had a chance to review it.

14 Q. What is Exhibit 344?

15 A. Exhibit 344 is an email with only 11:43:54
16 attachments from Evan Eneman at Facebook.com to
17 Kelley K. Perng at PwC.

18 And two of the attachments from the
19 email, which include the Wiki page that we were
20 looking at in the prior exhibit called "Deleting 11:44:14
21 Deleted Data," in addition to an additional Wiki
22 page called "Deletion Framework."

23 (Exhibit 343 was marked for
24 identification by the court reporter and is
25 attached hereto.) 11:44:26

1 Q. (By Ms. Weaver) And not to make this 11:44:27
2 complicated, but if you look at Exhibit 343, do
3 you -- can you confirm that this is the other Wiki
4 that is in this attachment in 344?

5 A. So in 343, which is the "Deletion 11:45:00
6 Framework," last updated June 3rd, 2013, at
7 8:02 p.m., the -- in the email, it is the "Deletion
8 Framework" last modified Thursday, July 12th, 2012,
9 at 1:49 by a different individual. So it -- it
10 appears to be the same Wiki page but different 11:45:32
11 versions of it.

12 Q. And do you have an understanding -- well,
13 wait -- strike that.

14 When did you last see Exhibit 344?

15 A. In documents I had reviewed over the 11:45:46
16 weekend.

17 Q. Why do you have an -- why do you
18 understand that these documents were sent to
19 someone at PwC, in or around February of 2013?

20 A. I -- I don't have an understanding 11:46:06
21 because there's context missing in the text of the
22 email or even the subject line is just 5.2.2B.

23 Q. And around this time, PwC was auditing
24 Facebook with regard to privacy controls associated
25 with [REDACTED] isn't that right? 11:46:25

1 MR. BLUME: Objection. Form. 11:46:29

2 THE DEPONENT: That is my understanding,

3 correct.

4 Q. (By Ms. Weaver) And you can confirm that

5 Facebook provided this to PwC as part of that 11:46:38

6 audit, right?

7 MR. BLUME: Objection. Form. Scope.

8 THE DEPONENT: I -- I'll reiterate,

9 without further context on the email, I don't know

10 exactly what the email was to know if that was a 11:46:52

11 specific request of the audit or -- or what the

12 purpose was.

13 Q. (By Ms. Weaver) Okay. We'll let the

14 jury decide that.

15 Looking back at Exhibit 342, the document 11:47:05

16 that we were discussing, the very specific question

17 to you, as Facebook's representative is, was it

18 ever Facebook's policy that it would retain

19 metadata or context around the post but would

20 delete user-generated content? 11:47:25

21 MR. BLUME: Objection. Form.

22 THE DEPONENT: Can you ask that question

23 again.

24 Q. (By Ms. Weaver) Yup.

25 A. I got confused by that. 11:47:35

1 Q. No problem. 11:47:36

2 At any point in time, was it Facebook's
3 policy that when a user requested deletion of its
4 account -- account, Facebook would delete UGC but
5 retain metadata, or the context around an action, a 11:47:46
6 post, for example?

7 MR. BLUME: Objection. Form.

8 THE DEPONENT: [REDACTED]
9 as we've been talking about it, which [REDACTED]
10 [REDACTED] 11:48:26

11 launched in 2011 in order to provide that.

12 Users had the ability to delete their
13 accounts prior to that, and dependent upon
14 retention time periods for -- for the deletion
15 of -- of the content, that would have been 11:48:44
16 identifiable before that.

17 I believe that answers your question.

18 Q. (By Ms. Weaver) So prior to 2011, your
19 testimony is that [REDACTED]

20 [REDACTED] [REDACTED]
21 [REDACTED]
22 [REDACTED]

23 MR. BLUME: Objection. Form.

24 THE DEPONENT: That is inaccurate.

25 Specifically after [REDACTED], 11:49:28

Page 67

1

█

█

█

█

█

7

8

█

█

11

12

13

14

15

16

17

█

█

█

21

█

█

█

█

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Prior to 2011, that process did not

exist, [REDACTED]

[REDACTED]

[REDACTED]

11:50:07

Q. (By Ms. Weaver) Perfect. Thank you.

I was not trying to trick you. I just

was trying to understand the policy. And you've

clarified it and I appreciate it.

Okay. Let's talk about anonymization.

11:50:18

On Exhibit 342, do you see where it says

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

11:50:31

And then it says [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

11:50:46

Page 68

1 Do you see that? 11:50:47

2 A. I see the sentences that you've read,

3 yes.

4 Q. With regard specifically to the sentence,

5 " [REDACTED] [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 [REDACTED] do you agree with that?

9 MR. BLUME: Objection. Form. Scope.

10 THE DEPONENT: Can you state that one 11:51:13

11 more time.

12 Q. (By Ms. Weaver) Specifically with regard

13 to the concept that [REDACTED]

14 [REDACTED]

15 [REDACTED] [REDACTED]

16 [REDACTED]

17 [REDACTED] o you agree with that?

18 MR. BLUME: Objection. Form. Scope.

19 THE DEPONENT: I -- I asked for clarity

20 because that feels like two separate and distinct 11:51:35

21 questions.

22 Q. (By Ms. Weaver) Okay. I can break it

23 out.

24 Do you agree that Facebook does not have

25 [REDACTED] 11:51:47

1 [REDACTED] 11:51:51

2 MR. BLUME: Objection. Form. Scope.

3 THE DEPONENT: That there is no [REDACTED]

4 [REDACTED] the double negative is getting me.

5 So there's -- there is [REDACTED] [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 Is that the question being asked?

9 Q. (By Ms. Weaver) Yes.

10 MR. BLUME: Same objection. 11:52:11

11 THE DEPONENT: That is correct.

12 Q. (By Ms. Weaver) And does Facebook have a

13 [REDACTED]

14 [REDACTED]

15 MR. BLUME: Objection. Form. And scope. 11:52:23

16 THE DEPONENT: That is the goal of the

17 [REDACTED] process, to [REDACTED]

18 [REDACTED] [REDACTED]

19 [REDACTED] But the things that

20 are not technically feasible are [REDACTED] 11:52:39

21 Q. (By Ms. Weaver) Okay. And then looking

22 at the next paragraph, does that describe the

23 process that you referred to earlier, where you

24 take a user ID and [REDACTED]

25 [REDACTED] 11:52:56

1 MR. BLUME: Objection. Form. Scope. 11:53:00

2 THE DEPONENT: This is the [REDACTED] I

3 referred to earlier, [REDACTED]

4 [REDACTED] in documentation. And,

5 yes, that is the [REDACTED] 11:53:20

6 Q. (By Ms. Weaver) And what triggers the
7 pseudonymization process at Facebook?

8 MR. BLUME: Objection. Form.

9 THE DEPONENT: [REDACTED]

10 [REDACTED] [REDACTED]

11 [REDACTED] that is supposed

12 to be triggered.

13 So that that information, in addition to
14 the next paragraph where other information that

15 [REDACTED] [REDACTED]

16 [REDACTED]

17 Q. (By Ms. Weaver) Okay. I'll come back to
18 the second question in just a second, by what you
19 mean by identifiable data.

20 Are there occasions where the process of 11:54:21

21 pseudonymizing data [REDACTED]

22 [REDACTED]

23 MR. BLUME: Objection. Form.

24 THE DEPONENT: Specifically -- and -- and

25 I -- I know you asked me not to do it, but the 11:54:45

Page 71

1 exceptions to that are -- are laid out in the UDDP, 11:54:50
2 and if we could refer to -- back to the UDDP in
3 340 --

4 Q. (By Ms. Weaver) Sure. Let's look at it.

5 A. -- what those exceptions are, are listed 11:54:59
6 there.

7 Q. Let's turn to Exhibit 340.

8 A. I'm waiting for it to load, and I will go
9 to the specific section.

10 Q. Fabulous. 11:55:14

11 And I think you're looking for page 45,
12 under "Exceptions."

13 A. That is correct. Page 45, under
14 "Exceptions."

15 And those exceptions fall into a few 11:55:34
16 categories, the first one being "[REDACTED]"

17 [REDACTED] The second one being "[REDACTED]"

18 [REDACTED] The third being [REDACTED]"

19 [REDACTED] And, finally, [REDACTED]"

20 Q. And what's -- what does [REDACTED] [REDACTED]

21 [REDACTED] refer to with regard to the exception
22 for "[REDACTED]"

23 [REDACTED]

24 A. Yeah. This is one -- I'll -- I'll

25 actually, for the sake of the record, read from the 11:56:06

Page 72

1 document, so it's -- it's clear and concise. 11:56:09

2 "We" -- being Facebook -- "are subject to

3 laws, regulations, and legal process worldwide that

4 impose [REDACTED]

■ [REDACTED] [REDACTED] [REDACTED]

■ [REDACTED]

■ [REDACTED]

■ [REDACTED]

■ [REDACTED]

■ [REDACTED] 11:56:35

11 Q. What's a litigation hold?

12 MR. BLUME: Objection. Form. Scope.

13 THE DEPONENT: I didn't specifically
14 prepare, as -- as a corporate representative, to
15 talk about what -- a litigation hold. 11:56:50

16 But from my personal experience,
17 litigation hold is where there is some kind of
18 order to hold data from -- from a Court or...

19 Q. (By Ms. Weaver) Are you done talking?

20 Your -- your last sentence -- 11:57:09

21 A. Oh, I was.

22 Q. -- ended with "or" -- or the last word
23 was "or."

24 A. Oh, I meant to say "order." But I was
25 going to cough and stopped. 11:57:16

1 Q. No problem. I've been there. 11:57:17

2 Are you aware of any litigation holds
3 being issued at any point in time, since you've
4 been working at Facebook, which suspended the
5 process of anonymization that we have just been 11:57:32
6 discussing; that is, [REDACTED]

7 MR. BLUME: Objection. Form. Scope.

8 THE DEPONENT: Can you ask that entire
9 question one more time.

10 Q. (By Ms. Weaver) Are you aware of any 11:57:48
11 litigation holds being issued at any point in time,
12 since you have been working at Facebook, which
13 suspended the process of pseudonymization that
14 we've been talking about; specifically, [REDACTED]

15 [REDACTED] 11:58:02

16 MR. BLUME: Same objection.

17 THE DEPONENT: The deletion process, in
18 the central deletion framework, [REDACTED]

19 [REDACTED] [REDACTED]

20 [REDACTED] [REDACTED]

21 [REDACTED] [REDACTED]

22 [REDACTED] there -- there are no
23 exceptions to that process moving forward.

24 Q. (By Ms. Weaver) With regard to the
25 process of [REDACTED], does that 11:58:42

1 happen on an ongoing basis for every user? 11:58:47

2 A. The -- to use a metaphor, so like if
3 you've ever taken the tour of the Golden Gate and
4 they like to tell you that they start painting it
5 and never finish painting it, and that is how that 11:58:59
6 process works. That is a process that's
7 continually running in the background to -- to
8 continually anonymize that information.

9 Q. Just to be clear, if I am a current
10 Facebook user, all of my data is anonymized [REDACTED]
[REDACTED] as a general rule; is that
12 right?

13 A. That is --

14 MR. BLUME: Object -- objection. Form.

15 THE DEPONENT: That is incorrect as 11:59:28
16 stated. Your statement included all of my data.
17 That could not be the case or the product couldn't
18 function.

19 I've got photos that I've uploaded of my
20 kids 15 years ago that -- in order for the product 11:59:41
21 to function and work, those photos can't be
22 anonymized or the data associated with them.

23 Very specifically, the pseudonymization
24 process is built to work in technical systems where
25 it's [REDACTED] content. 11:59:58

1 And so the pseudonymization process runs -- even 12:00:00
2 the name of the -- of the product itself, [REDACTED]
3 [REDACTED]
4 [REDACTED]
5 [REDACTED] [REDACTED]
6 [REDACTED]
7 [REDACTED]
8 MR. BLUME: Ms. Weaver, if you get to a
9 good breaking point...
10 Thank you. 12:00:27
11 Q. (By Ms. Weaver) And it's your testimony
12 that [REDACTED] that
13 process; is that right?
14 A. It is my testimony that --
15 MR. BLUME: Sorry. Objection. Form. 12:00:36
16 And scope.
17 Go ahead.
18 THE DEPONENT: It is my testimony that
19 [REDACTED] the deletion
20 process. 12:00:46
21 Q. (By Ms. Weaver) And are you aware of
22 whether or not -- independent of whether [REDACTED]
23 [REDACTED] that process, the anonymization
24 process was halted with regard to the named
25 plaintiffs in this action? 12:01:01

Page 76

1 MR. BLUME: Objection. Beyond the scope. 12:01:03
2 Form.
3 THE DEPONENT: I'm not aware.
4 Q. (By Ms. Weaver) Do you know who would
5 know? 12:01:10
6 A. I do not.
7 Q. Do you have any reason to think it was?
8 MR. BLUME: Objection. Form. Scope.
9 THE DEPONENT: It -- it is my
10 understanding that the deletion process and the 12:01:21
11 deletion framework is not halted for any of those
12 reasons.
13 MS. WEAVER: Okay. Yeah, we can take a
14 break now. Thank you.
15 You might want some water. 12:01:34
16 We can go off the record.
17 THE VIDEOGRAPHER: Thanks. We're off the
18 record. It's 12:01 p.m.
19 (Recess taken.)
20 THE VIDEOGRAPHER: Okay. We're back on 12:15:30
21 the record. It's 12:15 p.m.
22 Q. (By Ms. Weaver) Mr. Clark, you
23 understand you're still under oath, right?
24 A. Yes.
25 (Brief Interruption.) 12:15:47

Page 77

1 THE VIDEOGRAPHER: Sorry about that. 12:15:47

2 A recording is going. I just hit the

3 other backup thing by accident.

4 MS. WEAVER: Okay. Fine. So it is

5 recording right now; is that correct? 12:15:54

6 THE VIDEOGRAPHER: Yeah, we're recording.

7 Thank you.

8 MS. WEAVER: Perfect.

9 Q. (By Ms. Weaver) Mr. Clark, returning to

10 Exhibit 342, under the heading "Anonymization," we 12:16:00

11 were discussing the [REDACTED] process.

12 Do you recall that?

13 A. Yes.

14 Q. And it says "[REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED]

20 Do you see that? 12:16:33

21 A. I do see that sentence.

22 Q. And is that consistent with your

23 understanding?

24 MR. BLUME: Objection. Form. Scope.

25 THE DEPONENT: Until an account is -- 12:16:48

Page 78

1 until an account is deleted, the [REDACTED] [REDACTED]
[REDACTED]
3 Q. (By Ms. Weaver) And what does it mean to
4 say [REDACTED]
5 MR. BLUME: Objection. Form. Scope. 12:17:04
6 THE DEPONENT: I do not know what this
7 engineer meant by that.
8 Q. (By Ms. Weaver) Okay. And I meant to
9 open this with a question about testimony that you
10 gave a little bit earlier. 12:17:21
11 You referred to it might be that a
12 snapshot was taken of data before this process was
13 engaged in.
14 Do I have that correct?
15 MR. BLUME: Objection. Form. Scope. 12:17:33
16 THE DEPONENT: I -- if it's the statement
17 I remember, that sounds slightly inaccurate.
18 Q. (By Ms. Weaver) Well, let me read it
19 back to you --
20 A. Yeah. 12:17:49
21 Q. -- or I'm trying to.
22 You said "The deletion process in the
23 central deletion framework [REDACTED]
[REDACTED] [REDACTED]
[REDACTED] 12:18:05

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

[REDACTED] [REDACTED] [REDACTED]

[REDACTED]

Do you see that -- or is that consistent with your understanding?

MR. BLUME: Objection. 12:18:17

THE DEPONENT: That is consistent with my understanding.

Q. (By Ms. Weaver) So can you explain for me what you meant when you referred to a snapshot and what its purpose was? 12:18:25

MR. BLUME: Objection. Form. Scope.

THE DEPONENT: For the sake of preparation and preparing for this, I did evaluate our policies and practices with regards to what happens when a litigation hold, or a similar process -- and I understand that there [REDACTED] 12:18:39

[REDACTED] I do not know the technical details of it.

I also know that [REDACTED] [REDACTED], whether it is in -- whether it's in process or happens after that request has come in. 12:18:53

Q. (By Ms. Weaver) And what is the source of your information regarding the snapshot?

A. I only know the name of it as a snapshot. 12:19:10

1 And it was from -- it was from the -- from the 12:19:14
2 interviews that I did. And I believe that one
3 was -- in that conversation was counsel and
4 Mayur Patel.

5 Q. And Mr. Patel or is it Ms. Patel? 12:19:29

6 A. Mister.

7 Q. Mr. Patel told you that a snapshot might
8 be taken?

9 A. It was that the deletion process is [REDACTED]

[REDACTED] 12:19:46

11 Myself, nor himself, or our experts on the legal

12 hold process, it's merely the -- this is the

13 process associated with the deletion framework.

14 Neither of us are experts on the -- the actual

15 snapshot that's occurring, only the deletion 12:20:02

16 framework and the processes associated with it.

17 Q. What do you understand the snapshot is
18 taken of?

19 MR. BLUME: Objection. Form. Scope.

20 THE DEPONENT: I did not prepare for that 12:20:16

21 as part of this testimony.

22 Q. (By Ms. Weaver) Okay. But do you have

23 an understanding, as you sit here, what the

24 snapshot is taken of?

25 A. It -- I do not. It would be entirely 12:20:25

1 speculation, so I wouldn't know. 12:20:28

2 Q. Okay. Returning to Exhibit 342.

3 Do you see where it says -- I'm back to

4 the paragraph we were reading together -- and it

5 says "[REDACTED] [REDACTED]

6 [REDACTED]. They are kept in the

7 [REDACTED]

8 Do you see that?

9 A. I do see that sentence.

10 Q. Is that correct? 12:21:10

11 MR. BLUME: Objection. Form. Scope.

12 THE DEPONENT: As of the date of this

13 document and this engineering documentation,

14 that -- that is my understanding as to where that

15 association occurs. 12:21:26

16 Q. (By Ms. Weaver) And does that

17 association still occur in that table?

18 A. It still occurs in a physical table

19 with -- but the mapping to it is in TAO.

20 Q. And what is the name of that table? 12:21:46

21 A. I believe it's still the same table as

22 the underlying physical table. I don't know the --

23 I don't know the exact name of the association in

24 TAO.

25 Q. So -- 12:21:57

Page 82

1	A. Like --	12:21:58
---	------------	----------

2 Q. -- for example, if I wanted to search for

3 data associated with a current Facebook user, could

4	I go to that table, look up
---	-----------------------------

the data? 12:22:10

6 MR. BLUME: Objection. Form. Scope.

7 THE DEPONENT: I -- I believe you've

8 asked two or three different questions in that one.

9 Do you mind breaking that up?

10	Q. (By Ms. Weaver) Okay. It's actually	12:22:20
----	--	----------

11	meant to be one question.
----	---------------------------

12	A. Okay.
----	----------

13	Q. Using this table, can you identify data
----	--

14 | that is older than 90 days for a current Facebook

```
15 | user? 12:22:33
```

16 MR. BLUME: Objection. Form.

17 THE DEPONENT: The question itself isn't

18 specific enough for me to be able to answer with a

19	yes or a no.
----	--------------

20 Q. (By Ms. Weaver) Okay. Why don't you 12:22:44

21 answer as best you can and we'll try to clean it

22	up.
----	-----

23 | A. Okay. If you go back to your original

24 and -- and ask me the first part of your question.

25	Q. Using this table, can you identify data	12:22:58
----	--	----------

1 for a current Facebook user that is older than 12:23:04
2 90 days?

3 MR. BLUME: Objection. Objection.
4 Scope. And form.

5 THE DEPONENT: Could you identify data 12:23:16
6 for a current user.

7 Could identify in production data systems
8 metadata for a current user past 90 days because
9 it's not part of the [REDACTED] process. And so
10 that metadata might be, to use your earlier 12:23:44
11 example, the audience control settings on a post,
12 because that's part of the production storage
13 system.

14 But you would not use this table to map
15 to that association because it's current, active, 12:24:01
16 live production user data.

17 Q. (By Ms. Weaver) What do you mean when
18 you say "production data systems metadata"?

19 A. I will answer that in a few parts.

20 I think the production -- when I -- when 12:24:35
21 I refer to production, it's the storage systems,
22 the -- the Graph and the associated storage systems
23 for where the functionality of the platform --
24 the -- the Facebook product itself, where content
25 is served from and where the data, in order to 12:24:48

Page 84

1 populate that product, comes from. 12:24:52

2 Alternatively, the offline storage
3 systems or the -- or the data warehouse that is not
4 part of the production storage platform --

5 Q. Okay. 12:25:12

6 A. -- does not serve content directly to the
7 platform or the application.

8 Q. I understand.

9 Yes, you are answering a different
10 question than I am asking. And it's my fault, so 12:25:20
11 let me try again.

12 What data sources are searchable by [REDACTED]

13 MR. BLUME: Objection. Form. Scope.

14 THE DEPONENT: [REDACTED] is only used as

15 part of the [REDACTED] process for [REDACTED] [REDACTED]

16 [REDACTED] and that [REDACTED] occurs

17 on [REDACTED].

18 The RID also exists as a mapping in a

19 single table in the production storage system,

20 which in 2011, was called scrape_udb_assoc_rid. 12:26:03

21 And it's only the RID and UID mapping in
22 there.

23 Q. (By Ms. Weaver) Can you search Hive

24 using an [REDACTED]

25 MR. BLUME: Objection. Form. Scope. 12:26:32

1 THE DEPONENT: The answer to that 12:26:38
2 question is -- is, if I'm looking in an individual
3 table, can I look for a specific -- and that answer
4 would be yes.

5 MS. WEAVER: Okay. Let's mark tab 4. 12:26:52
6 We're going to come back to this exhibit,
7 but I just like where you're headed so I'm going
8 to...

9 Q. (By Ms. Weaver) And while we're waiting
10 for it to load, how can you search an individual 12:27:11
11 table using [REDACTED]

12 MR. BLUME: Objection. Form. Beyond the
13 scope.

14 THE DEPONENT: I did not specifically
15 prepare for that as part of my representing 12:27:31
16 Facebook.

17 Q. (By Ms. Weaver) Please answer the
18 question.

19 MR. BLUME: Same objection.

20 THE DEPONENT: In my personal capacity, 12:27:43
21 if I were querying Hive, I -- I would use one of
22 the -- one of the tools built to query offline
23 tables in Hive and would -- would use a query
24 language called HQL.

25 Q. (By Ms. Weaver) HQL? 12:28:03

1	A. Hive query language.	12:28:05
---	-------------------------	----------

2 Q. And how would you conduct a query if you
3 wanted to identify a dataset in Hive associated
4 with one user?

5	MR. BLUME: Objection. Form. Scope.	12:28:16
---	------------------------------------	----------

6 THE DEPONENT: Repeat that question or
7 clarify that question. It's very general and
8 broad.

9	Q. (By Ms. Weaver) If you wanted to	
10	identify data in Hive connected with one user, how	12:28:31
11	would you conduct that query using HQL?	

12 MR. BLUME: Objection. Beyond the scope.

13 THE DEPONENT: I didn't specifically
14 prepare for that as a -- as a representative of
15 Facebook. But in my -- in my personal experience, 12:28:45
16 I -- I wouldn't go -- I -- I couldn't go search
17 Hive for just one user or across all of Hive
18 without bringing Hive to its knees.

19 I can search a table, if I know a
20 specific table and I'm looking for a specific [REDACTED] 12:29:02
21 or -- or some- -- something like that. I -- I
22 would know the table. I'd know the -- I'd -- I'd
23 have to have an understanding of the structure of
24 that data and what I was looking for and how to
25 query and -- and how that data had been written 12:29:18

1 in -- in order how to go look for it. 12:29:20

2 Q. (By Ms. Weaver) And let -- let me ask
3 this, how does the HQL tool work?

4 MR. BLUME: Objection. Form. Beyond the
5 scope. 12:29:36

6 THE DEPONENT: Well, I can't answer that
7 question in the context of preparation that I did
8 as a representative of Facebook.

9 But in my personal capacity, HQL isn't
10 software. H -- HQL is part the -- the query 12:29:47
11 language that's part of Hive as a -- as a storage
12 system.

13 Q. (By Ms. Weaver) I understand. And
14 that's not what I asked you.

15 You said if you were going to search 12:29:58
16 Hive, you would use the HQL tool.

17 How does the HQL tool work?

18 MR. BLUME: Objection. Form. Beyond the
19 scope.

20 THE DEPONENT: That wasn't something that 12:30:12
21 I specifically prepared for as a representative of
22 Facebook.

23 But in my personal capacity, and to
24 clarify my prior answer and make sure that it's
25 accurate and concise there, I would either use a 12:30:23

Page 88

1 series of tools, and then I would use the HQL 12:30:26
2 language in -- in one of those tools.
3 Q. (By Ms. Weaver) Thank you.
4 So you would use HQL language and a
5 series of tools. 12:30:40
6 What are those tools?
7 MR. BLUME: Objection. Form. Beyond the
8 scope.
9 THE DEPONENT: I didn't specifically
10 prepare for that in the -- as a representative of 12:30:48
11 Facebook.
12 But in my personal capacity, an example
13 of one of those tools might be a tool called Scuba.
14 Q. (By Ms. Weaver) And what is Scuba?
15 MR. BLUME: Same objection. 12:31:09
16 THE DEPONENT: I didn't specifically
17 prepare for that as part of my testimony as a
18 representative of Facebook.
19 But in my personal capacity, Scuba is a
20 tool to help data scientists and data engineers, 12:31:18
21 where they know where data lives in Hive, to be
22 able to write a query to do analysis or -- or
23 analytics on a subset of data.
24 Q. (By Ms. Weaver) And you said to help a
25 data scientist and data engineers where they know 12:31:46

1 where data lives in Hive. 12:31:49

2 Do you recall that?

3 A. Yes.

4 Q. And how do data scientists and data

5 engineers knows where data lives in Hive? 12:32:00

6 MR. BLUME: Objection. Form. Scope.

7 THE DEPONENT: I did not prepare for that

8 as part of the scope of my testimony as a

9 representative of Facebook.

10 But in my personal capacity, what I meant 12:32:14

11 by that was that I would need to know the table

12 where that data lives in order to be able to go

13 write a query.

14 There are -- there are lots of tables.

15 And as a data scientist or a data engineer, I 12:32:30

16 would -- I would need to know where those tables

17 are in order to be able to go query to do that.

18 (Exhibit 345 was marked for

19 identification by the court reporter and is

20 attached hereto.) 12:32:43

21 MS. WEAVER: Okay. Let's take a look at

22 Exhibit 345, which is loaded.

23 And for the record, Exhibit 345 bears

24 Bates numbers FB-CA-MDL-00347605 through -886.

25 Q. (By Ms. Weaver) And while -- while 12:33:05

1 you're waiting for it, to pull it up, Mr. Clark -- 12:33:05
2 just let me know when you have it -- it says "This
3 document contains all of the recently used Hive
4 tables as defined by any table which has at least
5 one user in the past 30 days as of 5/12/2010. It 12:33:16
6 is sorted by the number of distinct users within
7 this period."

8 Do you see that?

9 A. It's still loading.

10 Q. Okay. 12:33:32

11 A. Is -- is that at the beginning of the
12 document?

13 Q. It's at the top of the document and it's
14 very long. It's about 280 pages, so...

15 A. Okay. The document, I think, is fully 12:33:56
16 loaded.

17 What was your question?

18 Q. First of all, do you recognize
19 Exhibit 3- -- 345, or do you know what it is?

20 A. I recognize the first page of it. I 12:34:12
21 don't -- I saw the first page of it. I don't think
22 I saw the whole thing. But I'm looking through it.

23 MS. WEAVER: And Josh, could we mark
24 tab 91.

25 /////

1 (Exhibit 346 was marked for 12:35:22
2 identification by the court reporter and is
3 attached hereto.)

4 THE DEPONENT: I've looked through --
5 I've looked through about 60 pages of it. I -- I 12:35:26
6 can look through the whole document, if you'd like.

7 Q. (By Ms. Weaver) No, no, that's fine. I
8 think -- if you need to, to answer the question,
9 you should.

10 But, in general, do you have an 12:35:36
11 understanding as to what Exhibit 345 is?

12 MR. BLUME: And -- and we object to the
13 extent it wasn't on the list provided by you before
14 the deposition.

15 THE DEPONENT: I -- I -- I would -- 12:35:49
16 any -- I don't know what it is. I don't know the
17 source of -- of it. If --

18 Q. (By Ms. Weaver) You discussed
19 previously -- well, strike that.

20 Is there any reason to think that this is 12:36:00
21 not a document that contained recently used Hive
22 tables, with at least one user in the past 30 days,
23 as of May 12th, 2010; i.e., an output for a search
24 within Hive at Facebook?

25 MR. BLUME: Objection. Form. Beyond the 12:36:15

1 scope. 12:36:16

2 THE DEPONENT: I -- I don't know that I
3 can make a representation either way. It contains
4 information that I would expect potentially
5 describing tables, but I -- without the query or
6 without further details, I wouldn't be able to
7 represent one way or the other what this is.

12:36:28

8 Q. (By Ms. Weaver) Okay. I'm going to ask
9 a few questions, in general. But maybe will spark
10 some recollection.

12:36:46

11 On the first page of this, you see it
12 says "[REDACTED]

[REDACTED]

14 Do you see that one? It says [REDACTED]

[REDACTED]

12:36:58

16 MR. BLUME: Objection.

17 THE DEPONENT: I do see it at the bottom
18 of the first page.

19 Q. (By Ms. Weaver) And -- and then it says

20 [REDACTED]

[REDACTED]

[REDACTED]

22 Do you see that?

23 A. I do see that.

24 Q. Do you know what partition means with
25 regard to Hive and Hive tables?

12:37:23

Page 93

1 MR. BLUME: Objection. Form. Beyond the 12:37:25
2 scope.

3 This is a document not produced in
4 advance of this deposition.

5 THE DEPONENT: I didn't specifically 12:37:33
6 prepare for that as part of my representation of
7 Facebook.

8 However, in my personal experience, a
9 partition is -- Hive is built by a series of --
10 files and tables are those files and partitions, as 12:37:47
11 is my general understanding.

12 Q. (By Ms. Weaver) Okay. And then it says
13 "Columns."

14 Do you see that?

15 MR. BLUME: Same objection. Form. And 12:38:04
16 scope.

17 And the document not produced pursuant to
18 the protocol.

19 THE DEPONENT: I do see the word
20 "Columns." 12:38:13

21 Q. (By Ms. Weaver) And then it says
22 "userid" after that.

23 Do you see that?

24 A. I do see that.

25 Q. And is -- do you understand that to mean 12:38:22

1 the Facebook ID? 12:38:24

2 MR. BLUME: Objection. Form. Scope.

3 Same objections with regard to the
4 protocol.

5 THE DEPONENT: Yeah, I did not 12:38:30

6 specifically prepare to answer that as -- as a
7 representative of Facebook.

8 In my personal experience, if I saw a
9 column named "userid," I would expect that to be
10 the user ID. 12:38:42

11 Q. (By Ms. Weaver) And was there a point in
12 time when Hive was searchable by user ID?

13 MR. BLUME: Objection. Form. Scope.

14 THE DEPONENT: I didn't specifically
15 prepare for that as part of my being a 12:39:03
16 representative of Facebook.

17 In my personal experience, your question
18 is extremely broad in being able to query Hive. If
19 I know a table and I know the "Table:" [REDACTED]
[REDACTED] and I 12:39:22

21 understood the structure, or the columns that are
22 part of that, I could query for user ID in that
23 specific table.

24 Q. (By Ms. Weaver) Okay. And I'll have you
25 look right now at Exhibit 346. 12:39:39

1	A. Waiting for it to refresh.	12:39:54
---	-------------------------------	----------

2 Q. And while we're waiting, just looking
3 back at Exhibit 345, to be clear, where this
4 document -- where columns are identified in Hive,
5 are columns generally fields that could be searched 12:40:05
6 using the data in that column?

7 MR. BLUME: Objection. Form. Scope.

8 And violates pro- -- the use of the
9 document violates the protocol.

10 THE DEPONENT: I didn't specifically 12:40:23
11 prepare for that as part of my representation -- or
12 being a representative of Facebook.

13 However, in my personal capacity, if I
14 know the table, I can query. But I have to -- in
15 order from a -- from a feasible -- from a 12:40:38
16 technically feasible perspective, I need to
17 understand the mapping of the table I'm working
18 with in order to do any queries like that.

19 Q. (By Ms. Weaver) Okay. Why don't you
20 take a look at Exhibit 346. 12:40:49

21 A. Okay. I --

22 Q. Do you have it up?

23 MS. WEAVER: And for the record, it's
24 ADVANCE-META-26 to -27.

25 THE DEPONENT: I have it loaded now. 12:41:02

1 Q. (By Ms. Weaver) And what is Exhibit 346? 12:41:04
2 A. 346 appears -- pardon me -- appears to be
3 [REDACTED]
4 [REDACTED]
5 Q. And that is the process within Hive of 12:41:30
6 [REDACTED]
7 correct?
8 MR. BLUME: Objection. Form.
9 THE DEPONENT: Specifically, the process
10 is [REDACTED] that creates [REDACTED] [REDACTED]
11 [REDACTED] tables.
12 Q. (By Ms. Weaver) Right. And we were just
13 looking at Hive tables with UUIDs in them.
14 So my question to you was, was it in --
15 was the practice in effect, prior to a certain 12:42:05
16 point in time, to maintain UUIDs in Hive?
17 MR. BLUME: Objection. Form. Scope.
18 And refers to a document produced in
19 violation of protocol -- or not produced, I guess,
20 in violation of protocol. 12:42:23
21 THE DEPONENT: Can you ask that question
22 one more time.
23 Q. (By Ms. Weaver) Yup.
24 We were just looking at Hive tables with
25 UUIDs in them, correct? 12:42:34

1 MR. BLUME: Objection. Same -- same 12:42:36
2 objection.

3 THE DEPONENT: I didn't prepare for that
4 as -- answering these questions as a representative
5 of Facebook. 12:42:43

6 But in my personal experience, we were
7 not looking at actual data of Hive tables. We were
8 only looking at descriptions in a document that may
9 or may not actually have been Hive tables.

10 Q. (By Ms. Weaver) Okay. Let me ask this. 12:42:58
11 Currently, is it possible to obtain a description
12 in Hive tables that identifies columns that would
13 include whether or not [REDACTED] are contained
14 in the tables?

15 MR. BLUME: Objection. Form. And scope. 12:43:13

16 THE DEPONENT: Well, I didn't prepare for
17 that specifically as part of this testimony, as a
18 representative of Facebook.

19 But in my personal experience, the way
20 that question is asked, that answer would be "no." 12:43:25

21 Q. (By Ms. Weaver) And why is the answer
22 "no"?

23 A. While I didn't prepare for this as part
24 of my testimony as a representative of Facebook, in
25 my personal capacity, the -- having the column 12:43:40

```
1   there information -- or the column information                                12:43:45
2   doesn't tell me if there's [REDACTED] in the
3   table.
```

4 What that tells me is, is there a field
5 that might be called user ID, which I would expect 12:43:55
6 would have either [REDACTED] [REDACTED] had not
7 been run on it [REDACTED] had been
8 run on it.

9 Q. And then those fields containing [REDACTED]
[REDACTED] would be searchable by [REDACTED], correct? 12:44:19

11	MR. BLUME: Objection. Form. Scope.
----	------------------------------------

12 THE DEPONENT: I did not prepare for this
13 as part of my testimony as a representative of
14 Facebook.

15 But based on my personal recollection, if 12:44:28
16 I know the table and in working with a specific
17 table, yes, I can query for a [REDACTED]

19 Q. (By Ms. Weaver) And looking at
20 Exhibit 346, do you see it also refers to a device 12:44:43
21 ID?

22 A. Let me read this document.

23	Q. No problem.
----	----------------

24 It's under "Overview," and I'm looking at

25 the third paragraph, which reads [REDACTED] 12:44:56

Page 99

1 [REDACTED] is deleted upon account 12:44:59

2 deletion. Also, [REDACTED]

3 [REDACTED]

4 [REDACTED]

5 Oh, I'm so sorry. I'm actually looking 12:45:31

6 at the wrong -- this is my -- my fault. Strike

7 that. I'm looking at the wrong document.

8 Let's look at Exhibit 346. That's

9 totally fine. We can --

10 Do you see where it says -- strike that 12:45:47

11 line of questioning and I'll return to it.

12 Do you see where it says [REDACTED]

13 A. I do see that section.

14 Q. And it says "[REDACTED]

15 [REDACTED]

[REDACTED]

16 [REDACTED]

17 [REDACTED]

18 Do you see that?

19 A. I do see that sentence.

20 Q. And what does -- what does that mean? 12:46:23

21 A. The -- part of -- part of the challenge

22 of building at this scale and volume of Facebook

23 and the transactions -- number of transactions that

24 happen, one of the things that engineer -- internal

25 Facebook engineers have to do consistently is be 12:46:51

Page 100

1 careful to make sure that if processes fail, 12:46:54
2 because there's many moving parts, that -- that
3 those processes are always like double-checked and
4 that there's something that does that.

5 And -- and what I would read into this 12:47:03
6 sentence in this Wiki page is that at -- at the --
7 on a -- on a daily basis, we make sure that every
8 [REDACTED] for any that did

9 not [REDACTED]
10 creation. Because if you didn't do that, you would 12:47:22
11 have [REDACTED]

12 [REDACTED] is
13 the case that is -- that that case is failure,
14 since those are unique.

15 Q. Got it. 12:47:41

16 And looking a little lower at
17 Exhibit 346, do you see where -- the sentence

18 [REDACTED]

19 [REDACTED]

20 [REDACTED] 12:47:58

21 Do you see that?

22 A. I do see that.

23 Q. Is that true?

24 MR. BLUME: Objection. Form.

25 THE DEPONENT: To the best of my 12:48:08

Page 101

1 knowledge, that is true. 12:48:08

2 Q. (By Ms. Weaver) And --

3 A. And that is the -- that is the -- that is

4 the new current name of the [REDACTED]

5 from the prior document. 12:48:18

6 Q. Right.

7 So for the record, in Exhibit 342, it

8 said they are kept in the [REDACTED]

9 [REDACTED]

10 [REDACTED] is that right? 12:48:36

11 A. That is correct.

12 Q. And where does that dim table live?

13 MR. BLUME: Objection. Form.

14 THE DEPONENT: Generally, it lives in the

15 production file system. And to the best of my 12:48:50

16 knowledge, it's available and queriable via TAO.

17 Q. (By Ms. Weaver) And what does dim stand
18 for?

19 A. I don't remember. It's -- it's a

20 generic -- it's a generic -- it's used 12:49:08

21 industry-wide as -- as a table identifier. I just
22 don't remember.

23 Q. I'm -- I'm asking also because in -- in
24 the Exhibit 345, the opening tables were labeled

25 [REDACTED] 12:49:27

1 Do you -- do you recall that? 12:49:31

2 A. I do see that.

3 Q. But you don't know what it means; is that
4 fair?

5 A. Just to share, I didn't -- I didn't 12:49:43
6 prepare for that specifically as part of my
7 testimony as a representative of Facebook.

8 But in my personal recollection, is a --
9 is -- is used generically industry-wide. And I've
10 used that outside of Facebook in table names. I 12:49:56
11 just don't remember what it stands for.

12 Q. Okay. And looking to the next page of
13 Exhibit 346, where it says "How Can I Access [REDACTED]"

14 And it --

15 A. Which page are you on? 12:50:18

16 Q. I'm sorry. It's the second page of
17 Exhibit 346.

18 And do you see in bold it says "How Can I
19 Access [REDACTED] the second from the bottom paragraph?"

20 A. I -- I do see that. 12:50:30

21 Q. And -- and it says you can either access
22 the table we've been discussing or -- and it refers
23 to another table.

24 Do you see that?

25 MR. BLUME: Objection. Form. 12:50:46

Page 103

1 THE DEPONENT: I do see that. 12:50:47

2 Q. (By Ms. Weaver) What is the table

3 identified after the "or"?

4 MR. BLUME: What was that? Can you ask

5 that again. I'm sorry. I missed that. 12:51:01

6 Q. (By Ms. Weaver) What is the table

7 identified after the "or"?

8 (Simultaneously speaking.)

9 MR. BLUME: Oh, after -- after the "or."

10 After the "or," yeah. 12:51:07

11 Objection. Form. Scope.

12 THE DEPONENT: It -- it's not a table, as

13 I'm reading this. If you read the follow-on

14 sentence, maybe -- it -- it refers to it as a www,

15 dub, dub, dub function. And so you can either call 12:51:27

16 the table, or you can run this function that

17 performs the lookup and pulls from TAO for newly

18 created IDs.

19 So it's as opposed to querying the table,

20 this is software functionality that you can call 12:51:47

21 for what you're trying to do.

22 MS. WEAVER: Okay. Thank you.

23 And now why don't you take a look at

24 Exhibit 347.

25 ///// 12:52:05

1 (Exhibit 347 was marked for 12:52:05
2 identification by the court reporter and is
3 attached hereto.)

4 MS. WEAVER: And while it's loading, I
5 will admit and apologize, that this was the 12:52:09
6 document I was reading from earlier inadvertently.

7 For the record, it bears Bates number
8 ADVANCE-META-26 to -27.

9 Q. (By Ms. Weaver) And when you have a
10 moment to review it, please just tell me what it 12:52:23
11 is.

12 A. Okay. I've just loaded it. I will
13 review it now.

14 Q. Okay.

15 A. This appears to be Revision No. 47176393 12:52:58
16 of the internal Wiki page on [REDACTED]

17 Q. And do you use a reference to user
18 identifying information there?

19 A. I -- I see -- I do see user identifying
20 information or UII a few times in the document. 12:53:28

21 Q. And what is UII?

22 A. UII would include information like -- I
23 know it's laid out in the UDDP -- and we could
24 refer to the document. But just generally, it's
25 information that could be used to identify me. 12:53:51

Page 105

1 And I think some examples that I had 12:53:54
2 given before, to just enforce those, would be -- an
3 IP address might be some kind of device
4 information. It -- it's any of that information
5 that might live in a table that, like I said, 12:54:07
6 could -- could tie back to something identifiable.

7 (Exhibit 348 was marked for
8 identification by the court reporter and is
9 attached hereto.)

10 MS. WEAVER: Okay. And I'm going to mark 12:54:20
11 as Exhibit 348, tab 99, Josh. And we'll turn to
12 that in a second.

13 Q. (By Ms. Weaver) But focusing on
14 Exhibit 347, the one that you have open, do you see
15 that this document refers to device identifiers? 12:54:34

16 And, again, that's three paragraphs down
17 under the word "Overview."

18 A. Okay. By the way, some of those specific
19 examples I was looking for in the last one, emails,
20 IP addresses, names, location, cookies are other 12:54:51
21 examples of UII.

22 Q. Perfect.

23 A. And what was your question?

24 Q. Do you see a reference to device
25 identifiers? 12:55:01

1 A. In the first paragraph? 12:55:07

2 Q. In the third paragraph, below the word
3 "Overview."

4 A. Yes.

5 Q. Okay. What's a device identifier? 12:55:14

6 A. While I didn't specifically prepare for
7 that as part of my testimony as a representative of
8 Facebook, in my personal experience, an example
9 of -- of a device identifier would be like a set of
10 information that uniquely identifies one device 12:55:42
11 versus another.

12 Q. Do you know what an IDFA is?

13 MR. BLUME: Objection. Form. Scope.

14 THE DEPONENT: I didn't prepare for that
15 as part of my represen- -- as part of my testimony 12:55:57
16 as a representative of Facebook.

17 In my personal experience, I know
18 generically what it is. But I don't have
19 experience working with IDFA.

20 Q. (By Ms. Weaver) Okay. Is an IDFA an 12:56:09
21 identifier for an Apple device?

22 MR. BLUME: Objection. Form. Scope.

23 THE DEPONENT: I didn't prepare for that
24 as part of my testimony as a representative of
25 Facebook. 12:56:22

Page 107

1 But in my personal experience, that is -- 12:56:22
2 that is the extent of my understanding for what an
3 IDFA is.

4 Q. (By Ms. Weaver) Okay. So you were
5 prepared to testify about Exhibit 347, but you 12:56:31
6 weren't prepared to testify about the sentence that
7 says "[REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED] is that right? 12:56:47

11 MR. BLUME: Objection. Form.

12 THE DEPONENT: I was prepared to talk
13 about the processes for the deletion of those
14 identifiers.

15 Q. (By Ms. Weaver) Okay. Can you -- can 12:57:05
16 you tell me what it means to cache a device

17 [REDACTED]

18 [REDACTED] or do we have to get another witness on
19 behalf of Facebook on this topic?

20 MR. BLUME: Objection. Form. Scope. 12:57:21

21 THE DEPONENT: While I didn't
22 specifically prepare for this as part of my
23 testimony on behalf of representing Facebook, in my
24 personal experience, [REDACTED]

25 means that in order to keep these identifiers 12:57:35

1 [REDACTED] and so that it doesn't [REDACTED] [REDACTED]
2 [REDACTED] or that that data would be
3 [REDACTED] after a
4 user deleted their account, that the -- the same
5 types of protections that are put in place on [REDACTED] [REDACTED]
6 [REDACTED]

7 Q. (By Ms. Weaver) What is a hash?

8 A. While I didn't prepare for that
9 specifically as part of my testimony as a
10 representative of Facebook, in my personal 12:58:05
11 capacity, a hash is where I represent a series of
12 information or -- or, you know, like a series of
13 words or descriptors in a common mathematical
14 formula that -- that comes out as some size of hash
15 that's defined by size. It might be 64-bit hash 12:58:25
16 that means there's 64 characters that were
17 generated as part of that and...

18 Q. And the purpose of hashing is
19 pseudonymization, correct?

20 A. No. 12:58:40

21 Q. Could it -- sorry.

22 A. So specifically -- specifically, the
23 purpose of building a hash is so that I have --
24 just technically and specifically a hash -- which I
25 did not prepare as part of my testimony as a 12:58:51

1 Facebook representative. 12:58:53

2 But in my personal capacity, the reason I
3 build a hash is so that I can quickly index and
4 store information to match an index between two
5 types of things without having to match to the 12:59:07
6 original. It's much more technically efficient in
7 order to do that.

8 Q. Is it part of a re-identification process
9 then?

10 A. The -- could you -- could you be more 12:59:18
11 specific in your question?

12 Q. What does re-identification mean?

13 A. Re-identification is the -- when
14 something has been de-identified in a way -- and
15 this would have to be done up front -- that the 12:59:36
16 re-identification -- that the de-identification is
17 done in such a way that there is either a key or
18 some capability to, in some point in the future,
19 re-identify what the source was that had been
20 de-identified. 12:59:54

21 Q. So when you described a hash is a way to
22 index and store information to match an index
23 between two types of things, is that a form of
24 re-identification?

25 A. No. 01:00:06

1 Q. Why not? 01:00:07

2 A. They are very different technical
3 concepts and -- and -- and just -- they're --
4 they're not -- it's not even apples and oranges.

5 It's -- it's apples and potatoes. It's -- it's 01:00:24

6 something entirely different. A hash is a
7 technical concept and a technical function.
8 Re-identification is a process.

9 Q. Okay. What is the purpose of [REDACTED]
10 [REDACTED] identifiers at Facebook, as set forth in 01:00:40
11 Exhibit 347, which you were prepared to testify
12 about?

13 MR. BLUME: Objection. Form.

14 THE DEPONENT: There are technical
15 safeguards in place around looking for inauthentic 01:00:55
16 behavior, for instance. And -- and part of the
17 ability to -- I didn't -- I -- I didn't
18 specifically prepare for this as part of my
19 testimony as a representative of Facebook.

20 But in my personal capacity, there -- 01:01:14

21 there are challenges like inauthentic behavior
22 and -- and automation and tools. And so [REDACTED]
23 identifiers and [REDACTED] [REDACTED] looking for a senses
24 [sic] of where the [REDACTED]

25 [REDACTED] 01:01:34

1 And in order to build systems to evaluate 01:01:37
2 from -- from both a security and an integrity
3 perspective what might be happening, the number of
4 logins from a [REDACTED] may be one of --
5 may be an example -- using a synthetic example, may 01:01:52
6 be an example of [REDACTED]
7 would -- would make it [REDACTED]
8 [REDACTED]

9 Q. (By Ms. Weaver) Okay. Is it your
10 testimony that in Exhibit 347, which describes the 01:02:09
11 [REDACTED] process, which you testified you were
12 prepared to describe, that the description of
13 device identifiers was done to identify abusive
14 behavior or was it done to try to anonymize data?

15 A. You're asking two very different 01:02:36
16 questions.

17 Would you ask those questions
18 independently.

19 Q. Absolutely.

20 In Exhibit 347, which describes the 01:02:42
21 [REDACTED] process that you've testified you were
22 prepared to discuss here today, and is in your
23 notes, it refers to hashing device identifiers.

24 What is your understanding of the purpose
25 of describing hashing identifiers -- device 01:02:59

1 identifiers in this document? 01:03:03

2 A. Specifically, in my role as -- as
3 preparing for this testimony, the process of
4 Hive Anon running on device identifiers is to
5 prevent any potential future [REDACTED]. 01:03:18

6 And as part of [REDACTED] and by doing
7 [REDACTED] and generating -- generating those
8 on a -- on a -- on a frequent basis, keeps activity
9 from being able [REDACTED], as a whole, by
10 having the [REDACTED] [REDACTED]
11 [REDACTED] in that table.

12 Q. And if the --

13 (Simultaneously speaking.)

14 THE DEPONENT: I'm talking about --

15 I'm -- 01:03:47

16 Q. (By Ms. Weaver) Oh, I'm sorry.

17 Go ahead.

18 THE DEPONENT: -- speaking to

19 specifically how [REDACTED] works in the
20 pseudonym -- pseudonymization process of -- of 01:03:55
21 this.

22 Q. (By Ms. Weaver) Okay. And if device

23 identifiers were not [REDACTED]
24 [REDACTED], or somehow other anonymized or

25 hashed, would it be possible to search Hive using 01:04:24

Page 113

1 device identifiers -- well, strike that. That's a 01:04:28
2 bad question.

3 In general, can you search Hive using
4 device identifiers?

5 MR. BLUME: Objection. Form. Scope. 01:04:36

6 THE DEPONENT: I -- I think in -- in
7 general, the -- all like -- I didn't specifically
8 prepare for that as part of my testimony, as a
9 representative of Facebook.

10 But in my personal capacity, the 01:04:50
11 questions that ask generically if it's possible to
12 query Hive, I'll continue to caveat with, if I know
13 a table and I know where that data is located, I
14 can query the specific table.

15 And when I query that specific table, if 01:05:07
16 [REDACTED] had not run, I could query for a device
17 ID across that time period.

18 Q. (By Ms. Weaver) And if --

19 A. Once [REDACTED] --

20 Q. I'm sorry. I'm sorry. 01:05:22

21 A. -- has run -- once [REDACTED] has run, I
22 couldn't query across the entire time period of
23 that table for that device ID because it would only
24 match in 10-day chunks, and all other information
25 that would help make it re-identifiable in any way 01:05:43

1 has also been taken out as part of the [REDACTED] 01:05:47
2 process.

3 Q. Perfect.

4 Turning back briefly to Exhibit 346 -- I
5 just meant to follow up. 01:05:59

6 It says on the very first paragraph, "(In
7 addition to [REDACTED], we also have
8 [REDACTED] etc.)."

9 Do you see that?

10 A. I do see that. 01:06:20

11 Q. What is a dating profile?

12 A. When the dating product was added to
13 Facebook, one of the potential concerns is when I'm
14 in the dating app, I don't have visibility to who
15 the person's actual profile is so that I can have 01:06:42
16 safe conversations, until at some point I want to
17 match with someone.

18 Part of doing that inside the app was not
19 presenting the user ID in any of that
20 functionality, or links back to the user profile, 01:06:58
21 so that that -- the dating app could live outside
22 of that, and if the person chose to share at some
23 point in the future with whoever they were chatting
24 with, they could.

25 And so a [REDACTED] was 01:07:11

Page 115

1 associated [REDACTED] in those 01:07:17
2 cases. So that at any point if I quit using the
3 dating app, it's never mapped directly to it. And
4 it's also severed, any time I delete my account,
5 any dating activity that there was. 01:07:31

6 Q. And why does Facebook do that?

7 MR. BLUME: Objection. Form. Scope.

8 THE DEPONENT: Facebook specifically
9 built [REDACTED] both for the purpose of [REDACTED]. And
10 in this case, the [REDACTED] 01:07:47
11 and -- and other [REDACTED] that if a
12 [REDACTED] ever changes, the ability
13 to [REDACTED] or [REDACTED]

14 [REDACTED] the canonical ID and what that

15 [REDACTED] [REDACTED]

16 [REDACTED]

17 [REDACTED] there exists a table to

18 [REDACTED]

19 Q. (By Ms. Weaver) Okay.

20 A. It's also -- that's the technical reason. 01:08:25

21 In addition, we have policies to also
22 protect the user ID. And part of having a privacy
23 program and -- and training Facebook internal
24 engineers and every employee on that privacy
25 program is to abide by that. And so it's both 01:08:41

Page 116

1 technical and process protections to protect the 01:08:44
2 user ID.

3 Q. And that's because a user ID can
4 personally and immediately identify a person,
5 correct? 01:08:52

6 A. That is an active user, correct.

7 Q. And if you'd turn now to what's been
8 marked as Exhibit 348, is this the definition of
9 UII you were thinking of earlier?

10 A. I just loaded it and I'm reading it. 01:09:26

11 Q. Yeah.

12 The question -- the first question is,
13 what is Exhibit 348, and when you're ready for it.

14 A. So this appears to be a --
15 Revision 52569136 of the internal Wiki page called 01:09:47
16 "What is UII?"

17 Q. And is this Facebook's definition of UII
18 currently?

19 A. Unfortunately, when I read this document
20 and I look at the "What is UII," there's a Wiki 01:10:08
21 "Redirect to Privacy/UII_Definition_0."

22 And so this document looks incomplete.

23 Q. So we would need that hyperlink for you
24 to be able to answer if this is Facebook's
25 definition of UII? 01:10:32

Page 117

1	A. That is correct.	01:10:37
---	---------------------	----------

2 Q. Okay. Let me ask you this question.

```
3         When was the last time you saw this
4     document?
```

5 A. I would need to go refer to my notes to 01:10:48

6 see if I saw this one.

7 Q. Okay. Go ahead and refer to your notes.

8 A. I -- I just honestly -- I -- I don't
9 think --

10	Q. I think it's fine to look at your notes.	01:10:57
----	---	----------

11 A. I don't know that I had in my notes which
12 documents -- I would -- I would need to physically
13 go look in the binder to see if I saw this one.

14 Q. Okay. I'll try to see if opposing
15 counsel produced that document. 01:11:12

16 But while we're working on that, I wanted
17 to ask a couple questions about Exhibit 348.

18 A. Specifically, the example earlier that I
19 was looking for?

20	Q. Uh-huh.	01:11:32
----	------------	----------

21 A. And the question you answered -- or
22 asked, was in 347, under "Overview," where there
23 were just examples of what UII -- that have been
24 generated in more than 90 days ago, included
25 emails, IP addresses, names, locations, cookies.

1 Q. And when you say "cookies," what do you 01:11:48
2 mean?
3 A. Web browser cookies.
4 Q. Such as?
5 MR. BLUME: Objection. Form. 01:11:58
6 THE DEPONENT: Cookies that Web browsers
7 use for the sake of authentication or similar
8 functions.
9 Q. (By Ms. Weaver) Facebook uses cookies,
10 right? 01:12:18
11 A. Facebook does use cookies.
12 Q. And what Facebook cookies are you aware
13 of --
14 MR. BLUME: Objection. Form.
15 Q. (By Ms. Weaver) -- that are UII? 01:12:27
16 MR. BLUME: Objection. Form.
17 THE DEPONENT: I can't actually recollect
18 without looking at my -- looking at -- looking back
19 in some of the prior documents. I -- there's --
20 there's a variety of -- there's -- there's a number 01:12:46
21 of different cookies.
22 Q. (By Ms. Weaver) Okay. Are you familiar
23 with the datr cookie?
24 A. I'm familiar with the datr cookie.
25 Q. And datr -- 01:12:57

Page 119

1 A. D-A -- sorry -- D-A-T-R. 01:12:59

2 Q. Yes.

3 What is the datr cookie?

4 MR. BLUME: Objection. Form. Scope.

5 THE DEPONENT: The datr cookie is a 01:13:13
6 unique browser identifier.

7 Q. (By Ms. Weaver) And when you say it's a
8 "unique browser identifier," is it unique to
9 browsers, or is it unique to a specific visit by a
10 device to a browser? 01:13:35

11 MR. BLUME: Form.

12 THE DEPONENT: That -- that question is
13 technically inaccurate. If you could ask it in a
14 different way.

15 Q. (By Ms. Weaver) Well, let me put it this 01:13:47
16 way. Sometimes cookies have lots of different
17 identifiers contained in them. Datr -- the cookies
18 can have the identifier of the browser and the
19 device ID and a number of things.

20 I'm asking what information is contained 01:13:59
21 in the datr cookie?

22 A. The datr cookie specifically is tied to
23 the browser.

24 Q. And the browser only?

25 A. It is -- it is the browser as it exists. 01:14:13

Page 120

1 And -- and so it's -- it's -- it's the browser as 01:14:15
2 it's operating.

3 Q. Okay. And you're aware of other Facebook
4 cookies as well; is that right?

5 A. I am. I would need to refresh my 01:14:27
6 recollection.

7 Q. And how would you refresh your
8 recollection?

9 A. I would -- there's -- I would -- I'd
10 probably look back at the filing I helped put 01:14:42
11 together which described all the Facebook cookies
12 from before.

13 Q. Do you mean --

14 A. I just don't remember the names of all of
15 them. 01:14:55

16 Q. Do you mean your notes?

17 A. No, I do not mean -- mean my notes. I --
18 the --

19 Q. What filings did you put together which
20 described all the Facebook cookies from before? 01:15:02

21 A. Not that I personally put together. It
22 was one that -- as Facebook, we had put together
23 that had all of them -- provided clarity on the
24 names and descriptions of all of them. And I
25 just -- I'm struggling to remember the names of all 01:15:22

Page 121

1 the cookies. 01:15:25

2 Q. Where is that document?

3 A. In a binder sitting across the room.

4 Q. Can you look at the document?

5 A. Yeah. 01:15:35

6 MR. BLUME: Objection. Form.

7 MS. WEAVER: Mr. Blume, will you allow

8 him to look at the document that he needs to

9 testify regarding these cookies?

10 MR. BLUME: Objection to the scope of the 01:15:46

11 list of cookies as it relates to topic 4.

12 MS. WEAVER: I sent an email identifying

13 these cookies, and I'm assuming that's why he

14 prepared this.

15 Why don't we go off the record. 01:16:00

16 SPECIAL MASTER GARRIE: Actually, let's

17 wait.

18 MS. WEAVER: Okay.

19 SPECIAL MASTER GARRIE: I actually was on

20 these emails -- I was on these emails exchanged as 01:16:07

21 a Special Master, and I'm just a bit -- is that --

22 before we just say this emails and cookies, do you

23 want to -- are we all on the same page when we say,

24 did you receive the emails, Counsel Blume? And are

25 we talking apples to apples with regards to the 01:16:25

Page 122

1 exhibit. 01:16:28

2 So Counsel, we identified multiple

3 cookies. You extend that to Counsel Blume,

4 correct?

5 MS. WEAVER: Yes. 01:16:37

6 SPECIAL MASTER GARRIE: Now, you're

7 asking about those specific cookies, not other

8 cookies, correct?

9 MS. WEAVER: Yes.

10 SPECIAL MASTER GARRIE: Okay. So then 01:16:42

11 have you -- and I believe those cookies we're

12 discussing are the ones that -- we -- that you

13 emailed about are the ones we're discussing now,

14 correct?

15 MS. WEAVER: Yes. 01:16:52

16 SPECIAL MASTER GARRIE: Okay. And

17 then --

18 MR. BLUME: Do you want to put those up?

19 SPECIAL MASTER GARRIE: Well, before --

20 she can share with the email but -- or we can enter 01:16:58

21 it into the record. But I just want to make sure I

22 understand before I -- before we go off the record,

23 that I understand what -- what's occurring.

24 So now, you're asking the witness about

25 those cookies. And Mr. Clark, when you said 01:17:14

Page 123

1 "cookies," were you referring -- you were referring 01:17:16
2 to the cookies that Counsel Weaver was asking you
3 about, correct?

4 THE DEPONENT: I was given an open-ended
5 question on a list of cookies. And I just couldn't 01:17:26
6 recollect the list of cookies. And so I -- I'm not
7 aware of --

8 SPECIAL MASTER GARRIE: That's why I'm
9 confused.

10 THE DEPONENT: Yeah. 01:17:31

11 SPECIAL MASTER GARRIE: So when we're
12 saying list of cookies --

13 THE DEPONENT: Yeah.

14 SPECIAL MASTER GARRIE: -- what do you
15 mean by "list of cookies"? 01:17:35

16 MS. WEAVER: You're asking me?

17 SPECIAL MASTER GARRIE: Like what I'm
18 confused is, Counsel --

19 MS. WEAVER: I want to ask this --

20 SPECIAL MASTER GARRIE: -- when you were 01:17:39
21 emailed a list of cookies to Counsel Blume, we were
22 talking about those cookies. But you said "list of
23 cookies," and I was just -- I just -- I want to
24 make sure we're all talking about the same cookies.

25 MS. WEAVER: Let me be clear. I am 01:17:53

1 seeking to elicit testimony about the cookies that 01:17:54
2 I emailed Mr. Blume about. It seemed to me that
3 Mr. Clark had prepared regarding those cookies,
4 Rob, and --
5 SPECIAL MASTER GARRIE: That's what I -- 01:18:05
6 that's what I'm trying to figure out.
7 MS. WEAVER: Yeah.
8 SPECIAL MASTER GARRIE: That it's not
9 other cookies that aren't related to the ones you
10 asked about. That's... 01:18:11
11 MS. WEAVER: Is there a document
12 that the --
13 MR. BLUME: And so put that -- if we put
14 that --
15 MS. WEAVER: Can I -- can I just ask, is 01:18:14
16 there a document that the witness prepared in
17 response to the questions I asked about those
18 cookies?
19 SPECIAL MASTER GARRIE: Maybe you could
20 provide -- 01:18:22
21 (Simultaneously speaking.)
22 MR. BLUME: The list --
23 SPECIAL MASTER GARRIE: -- that email
24 with the list of the cookies just so we're all on
25 the same page. 01:18:26

1 I apologize, Counsel Weaver, but -- I do 01:18:27
2 recollect it. But I don't -- I don't have it right
3 before me right now.
4 MS. WEAVER: You want me to just email it
5 around, Special Master Garrie, right now? 01:18:35
6 SPECIAL MASTER GARRIE: Well, if you can
7 put it on the screen so we can all see it --
8 MR. BLUME: Put it on the screen.
9 SPECIAL MASTER GARRIE: -- that would be
10 helpful. Because it is, it is helpful. 01:18:42
11 (Discussion off the stenographic record.)
12 MS. WEAVER: Can we go off the record? I
13 just need to find this.
14 SPECIAL MASTER GARRIE: We can go off the
15 record while you find it, of course. 01:19:27
16 MR. BLUME: Should we break for lunch?
17 MS. WEAVER: No. I'm in the middle of
18 questioning.
19 SPECIAL MASTER GARRIE: No.
20 MR. BLUME: Okay. Okay. Just a 01:19:35
21 suggestion.
22 SPECIAL MASTER GARRIE: We're in the
23 middle of a question.
24 MR. BLUME: Just a suggestion. Okay.
25 SPECIAL MASTER GARRIE: Forget it. 01:19:39

Page 126

1 MR. BLUME: Okay. 01:19:39

2 THE VIDEOGRAPHER: Okay. We're off the

3 record. It's 1:19 p.m.

4 (Recess taken.)

5 THE VIDEOGRAPHER: We're back on the 01:25:27

6 record. It's 1:25 p.m.

7 Q. (By Ms. Weaver) What information does

8 the datr cookie hold?

9 MR. BLUME: Objection. Form. Scope.

10 THE DEPONENT: While I didn't 01:25:42

11 specifically prepare for this as part of my

12 representation -- as being a representative of

13 Facebook, in my personal experience, datr cookie is

14 a cookie that tracks the browser as a unique

15 identifier for the browser. 01:26:01

16 Q. (By Ms. Weaver) Does the datr cookie

17 contain a URL?

18 A. I didn't specifically prepare for that as

19 part of my testimony, as a representative of

20 Facebook, but in my personal experience, I -- I do 01:26:21

21 not believe it contains any URL, but I don't know.

22 (Exhibit 349 was marked for

23 identification by the court reporter and is

24 attached hereto.)

25 Q. (By Ms. Weaver) Okay. Take a look at 01:26:27

Page 127

1 Exhibit 349, and tell me if this is the document 01:26:29
2 that you were referring to a moment earlier.
3 A. I've got the document open and I'm
4 looking.
5 Q. And I think it's on the sec- -- third -- 01:26:54
6 page 3.
7 A. That is the document I was referring to.
8 Q. And you were involved in the creation of
9 this document; is that right?
10 A. I did assist counsel in the creation of 01:27:11
11 this document.
12 Q. Did you assist counsel in the
13 identification of cookies?
14 MR. BLUME: Objection, to the extent your
15 involvement involves conversation with counsel, 01:27:19
16 it's privileged.
17 And I instruct you not to answer.
18 And work product.
19 Q. (By Ms. Weaver) Okay. Fine. I'll ask
20 this. 01:27:34
21 Did you provide information about what
22 the datr cookie is?
23 A. No.
24 Q. Do you know who did?
25 MR. BLUME: Objection. To the extent you 01:27:46

Page 128

1 know as a result of conversations with counsel, I'd 01:27:47
2 instruct you not to answer.

3 THE DEPONENT: I only know that because
4 it was part of the conversation with counsel.

5 MS. WEAVER: Rob, your position is you 01:28:03
6 telling him who knows about the datr cookie is
7 privileged; is that right?

8 MR. BLUME: No. Your question was, who
9 gave the information with regard to this letter
10 about datr -- datr cookies. That's privileged. 01:28:12

11 MS. WEAVER: Okay.

12 MR. BLUME: To the extent he knows that
13 information from discussions with counsel.

14 Q. (By Ms. Weaver) You're not prepared to
15 testify about the datr cookie, is that right, 01:28:23
16 Mr. Clark?

17 MR. BLUME: Object -- objection. Form.

18 THE DEPONENT: I'm not prepared to
19 testify about the datr cookie as a representative
20 of Facebook. Only from personal experience. 01:28:39

21 Q. (By Ms. Weaver) And you, from personal
22 experience, don't -- well, strike that.

23 Do you know how -- what -- strike that.

24 Do you know how the datr cookie
25 identifies a Web browser? 01:28:52

1 A. It -- I'm not prepared to answer that as 01:28:55
2 part of testifying as a representative of Facebook.
3 But in my personal experience, that -- the
4 datr cookie is a generated unique identifier to a
5 browser. How that occurs and -- and exactly the 01:29:09
6 content in it, I do not know.

7 Q. Who would know?

8 A. I -- I -- I am not prepared to testify to
9 that as a representative of Facebook. In my
10 personal experience, I don't have a specific name 01:29:25
11 that I would know that would know that part of the
12 process.

13 Q. Can you -- can you identify anybody that
14 you work with at Facebook who knows how the datr
15 cookie functions? 01:29:41

16 A. As of -- I -- I didn't prepare for that
17 as part of my testimony as a representative of
18 Facebook. But in my personal experience, I -- I
19 would go look up who I would need to, to go have
20 that conversation. I don't -- I don't know a name 01:29:59
21 offhand.

22 Q. Okay. Do you know -- okay. Strike that.
23 What is the fpb cookie?

24 A. I didn't specifically prepare for that as
25 part of my testimony representing Facebook. But in 01:30:14

1 my personal experience and -- I -- I would refer to 01:30:17
2 the -- I would refer to the filing for that detail.

3 The underscore FB cookie is set on the
4 third-party domain only if the advertiser/publisher
5 has installed the Facebook pixel business tool and 01:30:28
6 opted into the use of these cookies.

7 The cookie has its own -- or has a
8 browser identifier and -- and in the epoch time
9 when the cookie was created. And then for
10 additional details, there's documentation on the 01:30:43
11 external developer Facebook side.

12 Q. And you said the epoch time?

13 It's a little unclear. I just didn't
14 understand what you said.

15 A. The -- yeah, it's -- it's E-P-O-C-H. 01:31:01
16 It's -- it's a time commonly used in -- in computer
17 languages and UNIX time systems. The -- the time
18 since -- and I should know it offhand -- but
19 sometime in 1969 or 1970, and the number of
20 seconds that's -- 01:31:21

21 Q. Sorry. It's just that I couldn't
22 understand you and it didn't come through on the
23 transcript. That's fine.

24 Okay. What is the [REDACTED] cookie?

25 MR. BLUME: Objection. Form. Scope. 01:31:34

Page 131

1 THE DEPONENT: I didn't prepare to 01:31:37
2 specifically talk about that as a representative of
3 Facebook.

4 But in my personal experience, those are
5 the cookies that are used for my [REDACTED] to 01:31:44
6 Facebook and whether [REDACTED]. And so
7 that's -- that's where my [REDACTED]
8 information is stored.

9 Q. (By Ms. Weaver) Do third parties
10 transmit the Facebook user ID through [REDACTED] 01:32:01
11 cookies?

12 A. I didn't specifically prepare to talk to
13 that as a representative of Facebook.

14 But in my personal experience, those
15 cookies are only scoped to Facebook.com. So third 01:32:15
16 parties should not have access to that.

17 Q. They are not supposed to have access to
18 the Facebook user ID is your testimony?

19 MR. BLUME: Objection. Form. And scope.

20 THE DEPONENT: I didn't specifically 01:32:34
21 prepare for that as part of my testimony.

22 But in my personal experience, that --
23 that question is very, very generic and -- and --
24 and inaccurate.

25 What I had stated before is the [REDACTED] 01:32:46

1 [REDACTED] cookies are cookies that are used for 01:32:50
2 [REDACTED], and third parties are not
3 authorized or should not have access to those
4 cookies in the browser as they're scoped to
5 Facebook.com. 01:33:07

6 And to further reiterate, that is why we
7 have third-party application-scoped IDs and other
8 kinds of IDs, so that we don't give third parties
9 the canonical Facebook user ID.

10 Q. (By Ms. Weaver) You're referring to the 01:33:26
11 ASID; is that correct?

12 A. That is correct.

13 Q. Okay. We'll come back to that.
14 Why did Facebook create -- well, strike
15 that. 01:33:35

16 You said that the -- the fbc cookie is
17 used for authentication.

18 How does that function?

19 MR. BLUME: Objection. Form. Beyond the
20 scope. 01:33:46

21 THE DEPONENT: That -- that wasn't what I
22 said. I didn't specifically prepare for that as
23 part of my testimony.

24 But in my personal experience, the
25 xs/c_user and xs c_user cookies are what are used 01:33:56

1 for authentication and identify for users logged 01:34:03
2 in.

3 The_fbc cookie is a cookie that is set on
4 third-party domain only if the advertiser and
5 publisher has installed the Facebook pixel business 01:34:15
6 tool. And it is set only if the click originated
7 from the Facebook service.

8 For instance, when clicking on an ad in
9 Facebook newsfeed. And the_fbc cookie contains an
10 encrypted user ID. 01:34:32

11 Q. (By Ms. Weaver) And who encrypts the
12 user ID?

13 MR. BLUME: Objection. Form. Scope.

14 THE DEPONENT: I didn't prepare for that
15 as part of my testimony. 01:34:43

16 In my personal experience, I don't know.

17 Q. (By Ms. Weaver) Okay. And so just
18 the record -- so the record is clear, you did not
19 prepare to testify regarding the fpb cookie,
20 the_fbc cookie, the [REDACTED] cookie, the 01:34:56
21 [REDACTED] cookie or [REDACTED] cookies; is that right?

22 MR. BLUME: Objection. And to the extent
23 the question asks for preparation beyond topic 4 is
24 beyond the scope.

25 THE DEPONENT: I did not. As a -- as a 01:35:19

1 representative of Facebook, I didn't prepare for 01:35:20
2 that topic.

3 Q. (By Ms. Weaver) And did you prepare for
4 whether or not those cookies contained information
5 such as fbid, fbtype or URL? 01:35:26

6 MR. BLUME: Same objection.

7 Q. (By Ms. Weaver) Are you answering the
8 question?

9 A. As a part of my preparation, as a
10 representative of Facebook, I did not prepare for 01:36:03
11 that.

12 Q. Did you prepare to discuss the datr
13 cookie?

14 MR. BLUME: Objection, to the extent the
15 question seeks information beyond topic 4 is beyond 01:36:17
16 the scope.

17 THE DEPONENT: As a part of my
18 representation as a representative of Facebook, I
19 did not prepare for that. But did share -- from my
20 personal experience. 01:36:30

21 MS. WEAVER: Okay. We'll move on.

22 Q. (By Ms. Weaver) Do you know who at
23 Facebook would be qualified to discuss those
24 cookies?

25 MR. BLUME: Objection. Form. 01:36:47

1 THE DEPONENT: As a representative of -- 01:36:52
2 as my preparation as a representative of Facebook
3 for this testimony, I didn't prepare for that.

4 In my personal experience, I -- I do not
5 have a name. 01:37:03

6 Q. (By Ms. Weaver) Okay. Going back to
7 Exhibit 348.

8 Let me just ask a question. You
9 testified a moment ago that there was a binder in
10 the room that you used to prepare -- prepare that 01:37:21
11 included Exhibit 349; is that right?

12 A. Yes.

13 Q. And you reviewed and -- and recalled that
14 it referenced cookies, right?

15 A. That is correct. 01:37:45

16 Q. Did -- did you discuss whether you would
17 testify regarding those cookies?

18 MR. BLUME: Objection. Form.

19 THE DEPONENT: I did not.

20 Q. (By Ms. Weaver) Okay. Going back to 01:37:59
21 348.

22 Do you see that there's a reference in
23 the first paragraph -- I'm sorry. Okay.

24 There's a sentence that says "This means
25 we need to [REDACTED] 01:38:20

Page 136

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

[REDACTED]

[REDACTED]

[REDACTED]

Do you see that?

A. I do see that. 01:38:34

Q. And then it says [REDACTED]

[REDACTED]

Do you see that?

A. I do see that.

Q. What does that mean? 01:38:45

A. I'll use an example that I -- that I used
earlier.

I think when I upload a photo to the
service -- I upload the photo. I might attach a
description to that photo. That photo will get 01:39:06
likes and reactions and comments and other things.

The photo and those main interactions
will [REDACTED]

[REDACTED] The metadata -- some of the metadata
associated with that upload might include a log 01:39:29
that -- that showed that I had uploaded a photo and
what that photo was, my IP address, and other
information about the photo that I uploaded.

When the user deletes their account and
we [REDACTED] :39:56

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

[REDACTED] [REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED] it was deleted, the [REDACTED] [REDACTED]

[REDACTED] weren't stored in [REDACTED] and weren't a part

of that original record.

Q. And what does "long term analyses" mean?

A. In the future wanting to know about

activity of photo uploads.

01:40:44

An example might be going back in time to

look at how many photo uploads there were

in May of 2022, to have an understanding about the

performance and function of the systems of -- of

the application and the platform.

01:41:04

MS. WEAVER: Okay. Let's mark exhibit --

tab 92, please.

(Exhibit 350 was marked for

identification by the court reporter and is

attached hereto.)

01:41:10

Q. (By Ms. Weaver) And let me know when

you've had a chance to review it.

A. I still haven't had anything show up.

MS. WEAVER: It has for us.

THE DEPONENT: Oh, there it is. It just

01:41:53

Page 138

1 came in. 01:41:53

2 Q. (By Ms. Weaver) Do you recognize
3 Exhibit 350?

4 A. Let me read it.

5 Okay. I've had a chance to read it. 01:42:22

6 Q. Great.

7 What is Exhibit 350?

8 A. Exhibit 350 appears to be a Wiki page
9 titled "Overview," which is Revision 57833386 from
10 the internal Facebook Wiki. 01:42:38

11 Q. And so does it reflect Facebook's
12 procedure for [REDACTED] at a high level?

13 A. I -- as -- as opposed to procedure, I --
14 I -- I read this as an overview, a description.

15 Q. And what is it describing? 01:43:06

16 A. A high-level overview of Hive Anon.

17 Q. Is it describing the [REDACTED] process?

18 A. It -- it's a providing a high-level
19 overview of what [REDACTED] is.

20 Q. And what is [REDACTED]? 01:43:26

21 A. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

01:43:43

Page 139

1 [REDACTED] 01:43:49

2 Q. Okay. And looking at the second page of
3 the document, at Bates number -31, what does that
4 diagram reflect?

5 A. It reflects [REDACTED] [REDACTED]

6 [REDACTED]

7 Q. What is an [REDACTED]?

8 A. [REDACTED]

9 [REDACTED]

10 [REDACTED] to run against tables and [REDACTED] [REDACTED]

11 [REDACTED] those tables.

12 Q. Okay. I'm going to try to get --

13 A. To those --

14 Q. I'm sorry. Go ahead.

15 A. No. 01:44:43

16 MS. WEAVER: So I'm going to try to --

17 Josh, can you try to screen share this diagram.

18 MR. SAMRA: Yep. Give me a second.

19 Q. (By Ms. Weaver) Looking at this same

20 page, it gives a couple of examples; is that right? 01:45:02

21 A. Yes.

22 Q. And can you describe what -- how the
23 example is illustrating how this [REDACTED] works?

24 A. Yes.

25 So it appears that this example is -- if 01:45:28

Page 140

1 we have a table named [REDACTED] the 01:45:31
2 following columns: [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] And these 01:45:57
6 are actually -- these aren't even real actual
7 column names. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] When
13 these accounts were registered for how [REDACTED]
14 works in the -- I don't remember the name of the
15 table offhand -- but in the table that [REDACTED]
[REDACTED] there's a synthetic sample table here where
17 there's a [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] which is
23 the -- as opposed to going through and [REDACTED]
[REDACTED] all of the data in the file,
25 which is [REDACTED] goes through and gets -- 01:47:28

Page 141

1 gets [REDACTED] in this process. [REDACTED] [REDACTED]
[REDACTED]
3 which essentially [REDACTED]
[REDACTED] And the same happened for [REDACTED]
[REDACTED] 01:47:51
6 [REDACTED] in this synthetic example
7 were identified [REDACTED] and were [REDACTED] Those
8 are now [REDACTED] [REDACTED] being
9 the aggregated statistic was remained at 20 and 10.
10 And [REDACTED] 01:48:15
11 Q. Okay.
12 A. Finally, if John [REDACTED] account, in
13 the [REDACTED] table, John's
14 [REDACTED], therefore, none of the
15 applications or internal Facebook developers, or 01:48:31
16 anyone else, [REDACTED]
17 John's -- any -- any data [REDACTED].
18 Q. Okay. And if he does not delete his
19 account, they can still [REDACTED] for the [REDACTED] is that
20 right? 01:48:53
21 A. Until that data is [REDACTED]
[REDACTED] yes.
23 Q. Okay. And looking at the diagram, can
24 you describe what the diagram is reflecting?
25 Is that showing where the script is 01:49:07

Page 142

1 running? 01:49:09

2 A. Yeah. It's -- it's a -- it's a very poor

3 engineering diagram trying to explain these

4 concepts which are in bullets right above, which --

5 where it talks about how it works. At a high 01:49:42

6 level, there are [REDACTED] steps that occur during the

7 [REDACTED] process. [REDACTED] where a

8 software called [REDACTED] data to be

9 [REDACTED]

10 Two, whoever the owner of the data is, is 01:49:59

11 notified via a tool called mobilizer. And the --

12 the -- the owner is notified through -- through a

13 task using the task system.

14 The column -- the -- the column policies

15 are updated. The owner updates the policies using 01:50:20

16 the Hive Anon UI. There's a triggering directive

17 where -- using software called Roomba that a new

18 policy is picked up.

19 And then five, directive and action,

20 UDTF, that over 90 days data is Anon or null. And 01:50:39

21 then finally, with deletion, that once a user

22 deletes their account, the mappings are actually

23 deleted.

24 Q. Thank you.

25 A. The -- the diagram is trying to 01:50:57

1 demonstrate that, but poorly. 01:51:00

2 Q. Okay. And what is Scribe?

3 A. Scribe is a software development tool. I
4 didn't specifically prepare as part of my testimony
5 to answer what scribe was, as a representative of 01:51:24
6 Facebook. But in my personal experience, Scribe is
7 a developer tool.

8 Q. And what is it used for?

9 A. I -- I do not know.

10 Q. And how does [REDACTED] function? How does it 01:51:40
11 detect UII?

12 A. [REDACTED]

13 Q. [REDACTED] Sorry.

14 A. [REDACTED] is -- that's okay. As -- as a tool
15 is -- is -- is purpose built to identify patterns 01:51:51
16 of UII, through both manual rules, in addition to
17 machine learning, to look for what might be UII
18 in -- in any -- in any of those tables.

19 MS. WEAVER: Okay. Great.

20 We can take a break. 01:52:14

21 MR. BLUME: Lunch?

22 THE VIDEOGRAPHER: Okay. Off the record
23 it's 1:52 p.m.

24 (Recess taken.)

25 THE VIDEOGRAPHER: Okay. We're back on 01:53:32

Page 144

1 record. It's 1:53 p.m. 01:53:34

2 MR. BLUME: So with regard to topic 4,

3 which speaks to the processes related to deletion,

4 pseudonymization, de-identification,

5 re-identification association and deletion of user 01:53:48

6 data and information, as that relates to cookies,

7 Mr. Clark is prepared to discuss whether Facebook

8 uses cookies as identifiers; specifically,

9 identifiers for users. And if so, how Facebook

10 treats those cookies within the deletion framework. 01:54:07

11 It was -- it is -- it's our position that

12 to discuss the processes of that deletion

13 framework, to talk about the specific cookies, what

14 they are specifically, what information they get is

15 beyond the scope. 01:54:25

16 He's certainly prepared to talk about how

17 the framework -- deletion framework deals with

18 cookies, to the extent those cookies are

19 identifiers. But not any specific cookie or its

20 purpose or the information it gets. 01:54:37

21 SPECIAL MASTER GARRIE: He can do the

22 high level, but getting into the technical ways of

23 how the cookies operationally work within the

24 different frameworks he describes is beyond the

25 scope. 01:54:48

1 Is that what -- the gist of what we're 01:54:49
2 getting at?

3 MR. BLUME: Well, let -- let me clarify.

4 He can talk about the -- the details of
5 how the deletion framework deals with cookies to 01:54:55
6 the -- to the extent cookies are -- are
7 identifiers. But what is specific cookie seeks --

8 SPECIAL MASTER GARRIE: That's what I
9 mean. The specific cookies that were emailed or
10 identified by plaintiffs, they identified a subset 01:55:08
11 of specific cookies, those interworkings of how
12 those specific cookies interoperate with those
13 frameworks is -- he is not prepared to testify
14 about.

15 MR. BLUME: Except to the extent that 01:55:21
16 they --

17 SPECIAL MASTER GARRIE: The technical.

18 MR. BLUME: Right.

19 Except to the extent that those cookies
20 are considered identifiers and -- and are part of 01:55:26
21 the process.

22 It doesn't matter what the specific
23 cookie is, as far as the deletion framework. Every
24 cookie would be treated the same way. And he's
25 prepared to talk about how the deletion framework 01:55:41

Page 146

1 deals with cookies as -- en masse. But any 01:55:43
2 specific cookies, he -- is beyond -- we would argue
3 is beyond the scope.

4 They're all treated the same way. Every
5 cookie is treated the same way within the processes 01:55:55
6 of pseudonymization, de-identification,
7 re-identification, associations, deletion. It
8 doesn't matter which cookie. They're all treated
9 the same.

10 MS. WEAVER: So if I may -- 01:56:09
11 (Simultaneously speaking.)

12 SPECIAL MASTER GARRIE: Didn't -- didn't
13 he testify --

14 MS. WEAVER: The topic includes
15 association. We identified, for example, the named 01:56:13
16 plaintiffs' DYI files complaining -- containing
17 datr cookies precisely so we could understand what
18 data and information that's in the description.
19 User data and information is expressed through
20 those cookies, which the witness said and is 01:56:33
21 factually correct, are identifiers.

22 So Facebook is collecting and tracking
23 through the datr cookie which websites users visit,
24 and I -- I attempted to get testimony about that
25 today after sending -- 01:56:48

1 SPECIAL MASTER GARRIE: But he -- 01:56:50

2 MS. WEAVER: -- an email two weeks ago

3 to -- only to find out in the deposition that in

4 preparation here, counsel has not had the person

5 prepare on any of those cookies. 01:57:00

6 SPECIAL MASTER GARRIE: Well, one sec. I

7 don't want to -- let's not go down a rabbit hole

8 here because that's where we're heading and we

9 still have deposition left.

10 At the end of the day, prepared or not, 01:57:11

11 we can take that offline at a separate point. The

12 bottom line is the witness that's here now isn't

13 prepared to speak about those specific technical

14 cookies that are associated with this specific

15 topic, as it relates to how you just described it. 01:57:28

16 It is what it is, right?

17 MS. WEAVER: Yup, I understand.

18 SPECIAL MASTER GARRIE: But --

19 MR. BLUME: Hold on. Hold on.

20 Just to be clear, he's prepared to 01:57:36

21 testify about whether Facebook uses the datr cookie

22 as an identifier. That's -- so he can speak to

23 that.

24 SPECIAL MASTER GARRIE: But those were --

25 MR. BLUME: And then if so, how -- what's 01:57:44

Page 148

1 that? 01:57:47

2 SPECIAL MASTER GARRIE: Where -- where

3 I'm confused is those cookies she's referring to

4 are those, those things, like this is -- those are

5 the specific cookies that consist of what you're 01:57:53

6 talking about. So where I --

7 MR. BLUME: Right.

8 SPECIAL MASTER GARRIE: -- where I'm

9 getting confused is, those cookies that she

10 identified -- that are identified by plaintiffs 01:58:02

11 are -- I don't think all -- but a subset of the

12 exact topic you're talking about. But --

13 MR. BLUME: Any facts --

14 SPECIAL MASTER GARRIE: -- those are

15 technical tools -- 01:58:12

16 MR. BLUME: Well, but if -- if -- yeah.

17 Are the -- are -- is the following cookie -- does

18 Facebook consider the following cookie to be an

19 identifier. If yes, how does -- how does Facebook

20 deal with it within the deletion framework. 01:58:22

21 He's prepared to answer those questions.

22 But the -- but if -- if -- but the specific --

23 if -- if Facebook doesn't consider a specific

24 cookie to be an identifier, then it's not caught up

25 within the deletion framework, which is what he's 01:58:34

Page 149

1 here to testify about. 01:58:37

2 MS. WEAVER: So he's only here about

3 deletion. But the topic talks about association of

4 user data and information. That's what the topic

5 says. 01:58:44

6 MR. BLUME: The processes of -- the --

7 the processes of pseudonymization,

8 de-identification, re-identification, association

9 and deletion of --

10 MS. WEAVER: Of -- 01:58:54

11 MR. BLUME: -- of user data --

12 MS. WEAVER: -- user data.

13 MR. BLUME: -- within that -- it's the

14 process --

15 MS. WEAVER: Association of user data and 01:58:58

16 information --

17 SPECIAL MASTER GARRIE: No, let me -- let

18 me --

19 MS. WEAVER: Yeah.

20 SPECIAL MASTER GARRIE: The part 01:59:01

21 that I -- so what she's saying is that those

22 cookies are used to associate with specific users

23 by Facebook as tools. And she's asking him

24 specific questions about those cookies that are

25 believed and been represented, I believe, to 01:59:14

1 associate user activity or make the association of 01:59:17
2 a Facebook user and their activity. Those specific
3 subset of cookies. And then --

4 MR. BLUME: Yes. If Facebook --

5 SPECIAL MASTER GARRIE: -- association is 01:59:29
6 done via that cookie.

7 MR. BLUME: If Facebook -- if Facebook
8 considers the particular cookie to be an identifier
9 associated with a user and that -- and is part of
10 that process, he's -- he is happy to talk about it. 01:59:40

11 SPECIAL MASTER GARRIE: But he can talk
12 about those cookies.

13 MR. BLUME: He -- he can -- he can answer
14 the question whether -- whether Facebook considers
15 those cookies to be identifiers. It says -- 01:59:49

16 (Simultaneously speaking.)

17 SPECIAL MASTER GARRIE: But to know how
18 they -- she wants -- the question is how does
19 Facebook associate. How is that Facebook -- maybe
20 I'm missing something. But I believe what's being 01:59:59
21 asked is how is that association done by Facebook
22 with those cookies. Like what is the process
23 through which -- technical process through which
24 Facebook makes an association.

25 Maybe I'm misreading or mishearing what 02:00:13

1 plaintiffs are asking about. And my question is, 02:00:16
2 can he talk about how -- maybe I'm
3 misunderstanding.

4 Is he prepared to testify about the
5 technical process of how Facebook makes those 02:00:25
6 associations?

7 MR. BLUME: To the extent the -- by
8 "association," you mean identify -- identifiers?
9 In other words --

10 SPECIAL MASTER GARRIE: The user. 02:00:42

11 MR. BLUME: -- did he identify a user and
12 how that -- how that information is then captured
13 within these processes, as set forth in topic 4,
14 yes.

15 SPECIAL MASTER GARRIE: So if we open up 02:00:52
16 the cookie, we can -- he can walk us through how
17 that cookie makes those associations?

18 MR. BLUME: No. He can identify whether
19 or not these cookies are considered by Facebook to
20 be identifiers, generally. Not how they work. But 02:01:04
21 whether they are in the process, in the deletion
22 framework, considered to be identifiers. In other
23 words, used to identify the user.

24 SPECIAL MASTER GARRIE: Okay. The
25 specific -- 02:01:14

1 MS. WEAVER: I think -- well, we can save 02:01:15
2 for another day --
3 SPECIAL MASTER GARRIE: The technical --
4 he's not --
5 MS. WEAVER: -- because it seems very 02:01:17
6 clear that despite the fact that plaintiffs
7 identified specific pages pulled out of the DYI
8 file with datr cookies associated with the named
9 plaintiffs, this witness does not -- according to
10 the instructions of counsel, doesn't interpret the 02:01:34
11 datr cookie to be an identifier for users. And for
12 that reason, this witness is not prepared to
13 testify on that topic.
14 MR. BLUME: Well, you never asked -- you
15 never asked him that question. Ask him that 02:01:47
16 question.
17 MS. WEAVER: Either way -- Rob, you
18 excluded your preparation --
19 MR. BLUME: No, ask him the question.
20 THE COURT REPORTER: Hold on. Hold on. 02:01:52
21 Hold on.
22 SPECIAL MASTER GARRIE: No, you guys are
23 doing this again. Time out. Time out.
24 We'll go off the record and I'll reset
25 everything. And I will take time away from -- take 02:02:00

Page 153

1 time and add time, so we may end up at zero. 02:02:02

2 But the point being is stop and listen to

3 each other. The net/net is that what Counsel Blume

4 is saying, the question you just asked,

5 Counsel Weaver, you can ask the question and hear 02:02:13

6 the answer.

7 Did I miss that, Counsel Blume?

8 MR. BLUME: That's correct. No, that is

9 absolutely correct.

10 SPECIAL MASTER GARRIE: And then based -- 02:02:22

11 based on that answer, Counsel Weaver, you may

12 find --

13 MS. WEAVER: I think he said that's

14 incorrect.

15 MR. BLUME: No, I said that's absolutely 02:02:28

16 correct. Ask him if he considers the datr cookie

17 to be an identifier. If so, how it fits in the

18 process. And ask for --

19 MS. WEAVER: But the question is

20 whether -- sorry. 02:02:36

21 The question is whether it's associated

22 with user data and information. That's the topic.

23 MR. BLUME: The --

24 MS. WEAVER: Facebook's process of

25 association of user data and information. 02:02:46

1 MR. BLUME: And -- and for purposes of 02:02:52
2 pseudonymization, de-identification,
3 re-identification, that association is identifiers.
4 And so asking if it's -- if he considers it for
5 purposes of the deletion framework, which is what 02:03:02
6 he's here to testify, whether it's considered an
7 identifier. If it is, it fits into the process.
8 If it's not, then it doesn't. He's here to talk
9 about that deletion, de-identification,
10 pseudonymization and association with regard to 02:03:15
11 those that -- and within that process. Just ask
12 him the ordinary question.

13 SPECIAL MASTER GARRIE: That's a broad
14 question.

15 MS. WEAVER: I'll just -- Special Master, 02:03:23
16 I don't want to waste any more time. It's very
17 difficult to take depositions and have arguments
18 like this in the middle of a dep. So let's --

19 MR. BLUME: I agree.

20 MS. WEAVER: -- refer this to a different 02:03:32
21 time. And I would just note -- have you pay
22 attention, Rob, to the Oxford comma. In topic --
23 in topic 4, there's a comma after association.

24 SPECIAL MASTER GARRIE: Wait. Wait.

25 MS. WEAVER: All of those topics are 02:03:42

Page 155

1 individual. 02:03:43

2 SPECIAL MASTER GARRIE: I think -- I

3 think you made a good point. We're not

4 accomplishing anything here.

5 MS. WEAVER: Right. 02:03:48

6 SPECIAL MASTER GARRIE: I give 15

7 minutes --

8 MR. BLUME: Right.

9 SPECIAL MASTER GARRIE: -- back to

10 plaintiffs here because this was at my request. 02:03:50

11 I was just trying to see if we could

12 avoid the downstream issue that looks inevitable,

13 to come. So we will -- we will put a pin in it and

14 I will -- we will -- we will figure if it is

15 appropriate or whether it was or was not, or so on 02:04:06

16 and so forth.

17 I was hoping it would be resolved herein,

18 but it does not seem foreseeable.

19 MR. BLUME: Well, not -- yeah.

20 SPECIAL MASTER GARRIE: I understand, 02:04:15

21 Counsel Blume, your position. I fully get it. I

22 understand, Counsel Weaver, your position. I

23 realize there's a fundamental issue there that will

24 not be resolved during this break.

25 So everybody should go get lunch, and we 02:04:25

Page 156

1 will resume -- I was duly hopeful that I was 02:04:26
2 misreading what I thought, but it is fine --
3 MR. BLUME: Well, welcome your -- this
4 question, as you --
5 SPECIAL MASTER GARRIE: I mean, I thought 02:04:42
6 that -- you know, fair enough. I think there's
7 just a -- so we can take a break. Everybody get
8 lunch. And we'll put a pin in it and we'll resume.
9 MS. WEAVER: Okay. When do we want to
10 get -- come back? 02:04:50
11 MS. LAUFENBERG: We're still on the
12 record, by the way.
13 THE COURT REPORTER: Can we go off?
14 THE VIDEOGRAPHER: Sure. We're off the
15 record. It's 2:05 p.m. 02:05:01
16 (Recess taken.)
17 THE VIDEOGRAPHER: We're back on the
18 record. It's 2:55 p.m.
19 Q. (By Ms. Weaver) Hello, Mr. Clark.
20 Did you have a good lunch? 02:55:21
21 A. I did.
22 Q. Okay. You know that you're still under
23 oath, right?
24 A. That is correct.
25 Q. Okay. I'd like to ask you to just turn 02:55:29

Page 157

1 back to Exhibit 81 [sic]. We never quite got done 02:55:32
2 with it.

3 And for record, that's the 11-30-2011
4 "Data/DeletionDeletedData" internal Wiki.

5 A. I don't have -- oh, 342? 02:55:49

6 MS. WEAVER: I'm sorry. 342, yes.

7 What did I say?

8 THE DEPONENT: 81. That's okay.

9 MS. WEAVER: Apologies.

10 Q. (By Ms. Weaver) And I'll direct your 02:56:01

11 attention to the section here discussing

12 "Anonymization," where it says -- we had just

13 discussed the paragraph that says "It is simple to

14 [REDACTED] a user."

15 Do you recall that? 02:56:35

16 A. I see the paragraph.

17 Q. Yeah.

18 It's the paragraph where it identified

19 the table with the [REDACTED] between [REDACTED]

20 right? 02:56:50

21 A. Yup. Yes.

22 Q. Okay. And now look at the second

23 paragraph there.

24 "The second part is not as

25 straightforward, because it requires thinking about 02:56:57

Page 158

1 what content of your data tells you who a user is. 02:57:02

2 Can you [REDACTED] to

3 '[REDACTED] code? Probably not. A lotttt of

4 people [REDACTED] Their email address?

5 Obviously. (But emails are [REDACTED] [REDACTED]

6 [REDACTED] an [REDACTED] Probably, because with

7 a [REDACTED] too, an [REDACTED] that

8 [REDACTED] at that time. This requires thinking! But

9 also--do you really need" -- well, strike that.

10 Do you have an understanding of the 02:57:33

11 concept that even with some anonymization, content

12 of data can still identify a user?

13 MR. BLUME: Objection. Form.

14 THE DEPONENT: Can you ask that question

15 one more time. I was reading. 02:57:55

16 Q. (By Ms. Weaver) Sure. No problem.

17 Do you have an understanding of what this

18 paragraph is talking about, the sentences that I

19 just read?

20 MR. BLUME: Objection. Form. And scope. 02:58:02

21 THE DEPONENT: I do have an understanding

22 about [REDACTED] and the process of deleting UII and

23 the examples in here. And the complexity in making

24 sure that that UII that's deleted is complete and

25 that there still isn't the ability to identify. 02:58:21

Page 159

1 Q. (By Ms. Weaver) "There still isn't the 02:58:27
2 ability to identify"; is that what you said?
3 A. That -- that UII has been wiped.
4 Q. Okay.
5 A. That is -- that is what I said. 02:58:34
6 Q. And earlier, when we looked at
7 Exhibit 348, you said that you would like to have
8 seen the document at the hyperlink redirect the
9 privacy UII definition; is that right?
10 A. That is correct, because that is what it 02:58:56
11 actually says what is UII on that page.
12 MS. WEAVER: Okay. And I'll let counsel
13 know, we've looked for this document and been
14 unable to find it. So if you have it, we'd
15 appreciate you producing it so that we can complete 02:59:06
16 testimony about that topic.
17 MR. BLUME: Duly noted.
18 Q. (By Ms. Weaver) Looking a little lower,
19 at the second part, where it says "[REDACTED]
20 [REDACTED]; do you see that? 02:59:21
21 A. I do see that.
22 Q. It says "You must [REDACTED] any [REDACTED]
23 Do you see that?
24 A. I do see that.
25 Q. And that's referring to user-generated 02:59:33

Page 160

1 content, correct? 02:59:35

2 A. UGC means or -- or is an acronym for
3 user-generated content, correct.

4 Q. And -- and what is that again?

5 A. That was content generated by the user. 02:59:48

6 So that -- that might have been information that
7 they typed in the field. That might have been the
8 post. A broadly user-generated content might
9 include a photo or video as well.

10 Q. Okay. So why don't we turn to the second 03:00:03
11 page of the document.

12 A. Okay.

13 Q. And I'll just point to the bottom there
14 where it says "Remember. Our product is control
15 over data. Blogs and photo sharing existed before 03:00:23

16 Facebook, but they were public. Because there was
17 no real notion of 'identity' on the internet,
18 hundreds of millions were afraid to share. We let
19 users say who can see what, and that is why users
20 trust us, and that trust is why they upload content 03:00:40

21 to Facebook that they want to share. When the user
22 says no--the content is not for sharing
23 anymore--not even with themselves--they mean not
24 with us, either.

25 "Failure to comply with these regulations 03:00:52

Page 161

1 make Facebook a liar in the eyes of the 03:00:55
2 United States Congress. That's why we care.
3 Please don't be that guy."
4 Do you see that?
5 A. I do see that. 03:01:04
6 Q. What does identity refer to in that
7 paragraph?
8 MR. BLUME: Objection. Form. And scope.
9 THE DEPONENT: I -- I think this
10 document, as I mentioned earlier, is clearly the 03:01:14
11 editorial and writing of an individual engineer and
12 not necessarily a policy.
13 So when they say "identity," I -- I don't
14 know that I can necessarily interpret what that
15 engineer meant. 03:01:28
16 Q. (By Ms. Weaver) What does identity
17 mean -- mean at Facebook?
18 MR. BLUME: Objection. Form. And scope.
19 THE DEPONENT: I didn't -- I didn't
20 specifically prepare something for that, but I -- 03:01:46
21 I -- the -- in general, from just my own personal
22 experience, the -- the term "identity" is,
23 you know, those things that can be -- I --
24 you know, it's the combination of the things that
25 identify back to me or -- or tie back to me. 03:02:04

Page 162

1 MS. WEAVER: Okay. I'll mark tab 58, 03:02:08
2 please.
3 (Exhibit 351 was marked for
4 identification by the court reporter and is
5 attached hereto.) 03:02:22
6 MS. WEAVER: And for the record, while
7 we're waiting for it, Exhibit 351 is
8 Bates number FB-CA-MDL-01952478. And on the top it
9 says "Privacy Eng."
10 Q. (By Ms. Weaver) And let me know when you 03:03:00
11 have Exhibit 351.
12 A. Okay. I do not yet.
13 It just came through.
14 Q. Great. Thank you.
15 A. Waiting for it to load. 03:03:40
16 I have it.
17 Q. And let me know when you've had a chance
18 to look at it.
19 A. Still reading through it.
20 Q. That's okay. 03:05:09
21 Did -- have you seen this document before
22 today?
23 A. I believe I saw this document before
24 today.
25 MS. WEAVER: And for the record, this is 03:05:18

Page 163

1 a document that we identified in our email to 03:05:22

2 counsel.

3 THE DEPONENT: Yeah. That is where I

4 would have seen it.

5 Okay. 03:05:29

6 Q. (By Ms. Weaver) What is Exhibit 351?

7 A. It appears to be a work chat or workplace

8 communication.

9 I can't -- I can't tell. There's no

10 context between Ethan Raymond and Scott Renfro and 03:05:58

11 John Biesnecker.

12 Q. Who is Ethan Raymond?

13 A. I don't know.

14 Q. Okay. And, in general, what I'm focusing

15 on in this document and relates just to definition 03:06:23

16 of user identifiable information.

17 And the first question is, Ethan Raymond

18 apparently is raising questions about what UII is.

19 And do you see where he cites a couple internal Web

20 links there. 03:06:43

21 Right in the very top of the page,

22 there's "[REDACTED]

[REDACTED]

24 then under that there's the [REDACTED]

25 Do you see that? 03:06:55

Page 164

1 A. The [REDACTED] 03:07:01

2 Q. Yes.

3 A. I do see that link, yes.

4 Q. Yes.

5 What is "[REDACTED]" 03:07:04

6 A. As we talked about earlier, in the

7 [REDACTED] page, [REDACTED] a tool that looks at

8 [REDACTED] in a table in [REDACTED] and

9 looks [REDACTED] Does so through [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 Q. So -- I'm sorry.

13 A. [REDACTED] would be how some of that

14 logic is built and what it's looking for.

15 Q. So is [REDACTED] a tool? 03:07:36

16 A. [REDACTED] is a software tool.

17 Q. And do you know --

18 A. The pieces --

19 Q. I'm sorry. I just can't -- I can't tell

20 when you're done speaking. I apologize. I'm not 03:07:48

21 trying to interrupt you.

22 A. A piece -- it's a -- it's a -- it's a

23 piece of software specifically built for looking

24 [REDACTED]

25 Q. And when did it first come into use? 03:08:01

Page 165

1 A. I know that it's been around a while. I 03:08:10
2 don't remember exactly when that tool started. I
3 know that it predates [REDACTED] based on this document.

4 Q. Yes.

5 And were you just looking for that answer 03:08:23
6 in another document in front of you?

7 A. I was double-checking my notes from
8 earlier this morning to see if I had made note of
9 that.

10 Q. I see. Okay. 03:08:32

11 And what do you -- well, strike that.

12 How does [REDACTED]
13 and who received reports of it?

14 MR. BLUME: Objection. Form. And scope.

15 THE DEPONENT: Well, as I'm reading this 03:08:47

16 example -- or as I'm reading this document, [REDACTED] was
17 not specifically written to [REDACTED]

18 [REDACTED] And if I'm looking at the example of
19 this document, these were separate examples where a
20 question was asked, do we have a standard and 03:09:11

21 comprehensive definition of exactly what PII is at
22 Facebook. I've looked at the following links which
23 give general definition of examples of PII.

24 And so the [REDACTED] doesn't [REDACTED]

25 [REDACTED] [REDACTED] proactively within policy 03:09:25

1 [REDACTED] 03:09:29

2 Q. (By Ms. Weaver) I understand.

3 But apparently there was a document

4 created and was available in [REDACTED] called [REDACTED]

5 [REDACTED] is that how you interpret that? 03:09:47

6 MR. BLUME: Objection. Form. And scope.

7 THE DEPONENT: Once again, if I -- if I

8 look to the document, as this is written -- and I

9 want to make sure maybe that we're reading the same

10 thing. 03:09:57

11 At the -- towards the bottom of what

12 looks like a paragraph break, there is -- it says

13 "Question 1: Do we have a standard & comprehensive

14 definition of" exactly what Face- -- what [REDACTED] --

15 "what exactly" [REDACTED] at Facebook? I" -- 03:10:10

16 being Ethan Raymond -- "have looked at the

17 following links, which give general definitions or

18 examples of [REDACTED]

19 Q. (By Ms. Weaver) Right.

20 A. And I see a star, which would be a 03:10:22

21 bullet, "[General definition]." I see another star

22 that -- "[What counts as [REDACTED]]," which is

23 the [REDACTED] you're referring to.

24 And then I see a third star, which would

25 be [REDACTED] which are -- these are just 03:10:36

Page 167

1 separate examples of pages this person had read. 03:10:40
2 They're --
3 Q. Right. I understand.
4 And right before that third star, do you
5 see the words [REDACTED] 03:10:50
6 A. I do. I see that as part of the URL.
7 Q. Right.
8 A. Associated -- that is the Wiki URL
9 associated with
10 "(https://our.internmc.facebook.com/intern/wiki/Con 03:10:58
11 tent_Policy/CO_Resources/Known_Questions/" -- and
12 the #9 dot, in Wiki terms, would link directly to
13 question 9. And 9 -- the 9th question was
14 "_Privacy_Violations."
15 Q. Understood. 03:11:27
16 That's exactly what I was trying to lay
17 out.
18 So that document lists [REDACTED]
19 [REDACTED] but you think it's not in [REDACTED] is that
20 right? 03:11:38
21 A. Those are entirely separate bullets.
22 That page is what counts as [REDACTED]
23 Q. Got it. Okay. Great. Moving on.
24 A little bit lower, do you see --
25 A. Yeah. 03:11:49

1 Q. -- where Scott Renfro wrote we -- 03:11:49

2 "Instead, we long ago started using this term [REDACTED]

3 [REDACTED]

4 A. Yeah.

5 Q. And he said "Generally, we try to avoid 03:12:00

6 the use of the [REDACTED] altogether because there

7 are too many different interpretations, including

8 an especially large split between the [REDACTED]

9 [REDACTED] about the definition."

10 I switched those sentences around, but 03:12:17

11 you see them, right?

12 A. I do see them.

13 Q. Okay. And so do you understand, if [REDACTED]

14 includes not only the [REDACTED]

15 [REDACTED] but 03:12:30

16 also includes [REDACTED] and other

17 things that might -- may [REDACTED]?

18 A. I do see that.

19 Q. Do you agree with that?

20 MR. BLUME: Objection. Form. Scope. 03:12:47

21 THE DEPONENT: I -- I do. And I actually

22 think this is -- I do want to -- I do want to call

23 out something specific in that sentence as well.

24 Because I think while we were talking about cookies

25 before the break, one of the things that's really 03:12:58

Page 169

1 important in the distinction here, that I did 03:13:01
2 prepare for, are how cookie values are handled by
3 the deletion process.

4 We don't store the cookies themselves.
5 Cookies only exist on a Web browser. Whereas, the 03:13:11
6 cookie values themselves, like when a -- like the
7 datr cookie contains a set of information.

8 One of the pieces of information in there
9 would be the datr key itself, which I talked about
10 from my own personal experience. But in my 03:13:30
11 preparation, when that key is stored and it is
12 something that is potentially user identifiable,
13 the handling of that would be UII as stated here.
14 So this is consistent with my understanding.

15 Q. (By Ms. Weaver) Okay. And just to 03:13:45
16 clarify the record, is it your understanding that

17 [REDACTED] includes not only

18 [REDACTED]

19 [REDACTED], but also includes [REDACTED]

20 [REDACTED] and other things that [REDACTED] [REDACTED]

21 [REDACTED]

22 A. Yeah. The important qualification there
23 being that [REDACTED]

24 Q. Okay. Great.

25 And then do you see a little lower, 03:14:13

1 there's another message from Mr. Renfro at 03:14:18

2 7:42 a.m., and he says -- I'm sorry, at

3 1:28 p.m. -- it's very -- down at the bottom.

4 He's referring -- it -- it says "Not

5 really. [REDACTED] a subset of User Data." 03:14:39

6 Do you see that?

7 A. I do see that.

8 Q. And what is [REDACTED]

9 MR. BLUME: Objection. Form.

10 Q. (By Ms. Weaver) You know, if you need to 03:15:17

11 read it, I can -- I -- I could try to sort of jump

12 ahead, but I can go back.

13 A. Yeah, I'm -- I'm -- I'm --

14 Q. That's fine.

15 A. -- reading the rest of the context, so... 03:15:23

16 Q. Yeah. Let me read it to you.

17 So at 7:42 a.m. Scott Renfro writes

18 "There's also been some work to identify user data

19 by [REDACTED] by looking at all the

20 types [REDACTED] when a user account is 03:15:35

21 deleted."

22 Do you see that?

23 A. Yeah. I'm -- I am reading further up in

24 the document to make sure I've got the right

25 context for how this is being referred to. 03:15:44

Page 171

1 Q. Excellent. 03:15:46

2 And so the question, when you're ready,
3 is what is [REDACTED]

4 MR. BLUME: Objection. Scope. Form.

5 And scope. I'm sorry. 03:16:12

6 THE DEPONENT: Yeah. My understanding of
7 what [REDACTED] is, is that it -- it is a

8 classification. I -- I don't know the taxonomy for
9 that classification. And it -- it -- so that

10 certain types of actions and what that data may be. 03:17:39

11 How they are referring to it in this
12 context, I am unfortunately not familiar with.

13 Q. (By Ms. Weaver) Did you discuss this
14 with Mr. Renfro in preparation for your deposition?

15 A. We did not -- 03:17:50

16 (Court Reporter initiates discussion off
17 the stenographic record.)

18 THE COURT REPORTER: John, can you go off
19 the record?

20 THE VIDEOGRAPHER: Yeah. 03:18:11

21 We're off the record 3:18 p.m.

22 (Recess taken.)

23 THE VIDEOGRAPHER: Okay. Back on the
24 record. It's 3:19 p.m.

25 Q. (By Ms. Weaver) Great. 03:19:23

Page 172

1 And so looking a little bit lower back to 03:19:25
2 Mr. Renfro was writing at -- July 10th, at
3 1:28 p.m.
4 He says "Not really. [REDACTED] is a
5 subset of User Data. It's sensitive in the context 03:19:38
6 [REDACTED] works in because it's User Data.
7 Basically, [REDACTED] subset
8 of User Data. User Data is what we usually care
9 about unless we care just about things that are
10 [REDACTED] 03:19:54
11 care about."
12 Do you see that?
13 A. I do see that sentence or paragraph.
14 Q. Do you agree that [REDACTED]
15 MR. BLUME: Objection. Form. And scope. 03:20:10
16 THE DEPONENT: Based -- based on this
17 paragraph, PII, as Scott had mentioned prior in
18 this document -- Mr. Renfro -- has a variety of
19 definitions.
20 [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
25 Q. (By Ms. Weaver) Great. 03:21:01

1 And so looking at Exhibit 340, the "User 03:21:01
2 Data Deletion Policy," when it refers to user data,
3 we unfortunately have not been produced the
4 document at the hyperlink to user data in
5 Exhibit 340, and we just received this document -- 03:21:14
6 I think they were loaded Saturday morning.

7 But for the -- what is your definition of
8 user data, as used in this policy?

9 A. As used in this policy, I would expect it
10 to include all user-generated content and user 03:21:42
11 identifiable information.

12 Q. Does it include user identifiers as well?

13 A. As -- as I -- as I just said, it would
14 include user-generated content and user
15 identifiable information. And the -- the term 03:21:57
16 "user identifiable information" implies that the --
17 that the information itself could be used as
18 identifiable to an individual.

19 Q. Right.

20 And just to be specific, and to be clear, 03:22:15
21 does it also include like [REDACTED]

22 [REDACTED]

23 A. There is only one canonical user
24 identifier that matters and that's the user ID,
25 FBID, UID that -- the same single user identifier 03:22:38

Page 174

1 is the one that matters most. 03:22:44

2 And I couldn't answer the question
3 identifiers just previously in -- in -- as that
4 is -- that is too generic use of the term.

5 We -- because of [REDACTED] and 03:22:54

6 because of after somebody deletes their account,
7 the [REDACTED] no longer user

8 [REDACTED] as that [REDACTED]

9 nor is it [REDACTED]. It -- it's -- it's not

10 [REDACTED] 03:23:14

11 Q. Is it user data?

12 MR. BLUME: Objection. Form.

13 THE DEPONENT: Can you ask a complete
14 question. I want to make sure I understood the
15 question you're asking. 03:23:37

16 Q. (By Ms. Weaver) Are the actual
17 identifiers we just discussed, user data, do they
18 fall within your definition of user data?

19 A. We just discussed two. So I want to make
20 sure I'm answering the right ones. 03:23:51

21 The [REDACTED] is user
22 data. And when an account is deleted, that --
23 that's [REDACTED]

24 The RID, while an account is active, is
25 UII, because there is a mapping from the RID to the 03:24:13

Page 175

1 [REDACTED] Once an account is deleted is [REDACTED] 03:24:18
2 as it is no [REDACTED]
3 [REDACTED]
4 Q. Is the [REDACTED] -- well, it's user data and
5 UII? 03:24:40
6 MR. BLUME: Objection. Form.
7 THE DEPONENT: The SID, while an account
8 is active, [REDACTED]. Once an account
9 is deleted, it is [REDACTED]
10 [REDACTED] 03:25:13
11 Q. (By Ms. Weaver) And is the ASID, UII or
12 user data?
13 A. The [REDACTED] While an account is
14 active and a consumer of a [REDACTED]
15 [REDACTED] or if given permission and consent to 03:25:29
16 a third-party developer to use that, the [REDACTED]
17 [REDACTED] -- is the [REDACTED]
18 [REDACTED] identifier
19 that is given to [REDACTED]
20 [REDACTED]. And it 03:25:51
21 is unique [REDACTED] and to that --
22 that [REDACTED]
23 It is not identifiable externally. It is
24 only identifiably intern- -- identifiable
25 internally to internal Facebook developers. And as 03:26:11

Page 176

1 long as that [REDACTED] is there, it 03:26:16
2 is [REDACTED] in that sense.
3 It's intentionally made because we don't
4 give the [REDACTED]
5 [REDACTED] everything, 03:26:28
6 to [REDACTED] because if a user
7 de-activates the application or terminates their
8 connection with that third-party developer, [REDACTED]
9 [REDACTED]
10 [REDACTED] And the FBID has no meaning -- or 03:26:47
11 sorry -- the [REDACTED]
12 [REDACTED].
13 Q. So -- I'm sorry.
14 A. So while the user is active and using the
15 [REDACTED] is [REDACTED] internally. 03:27:01
16 And once that [REDACTED] or once the
17 user deletes their account, it is [REDACTED]
18 internally.
19 Q. Is the ASID still in use?
20 A. The ASID is still in use -- 03:27:20
21 Q. And when was it --
22 A. -- to best of my knowledge.
23 Q. And when was it first used?
24 MR. BLUME: Objection. Form.
25 THE DEPONENT: As I didn't prepare for 03:27:36

Page 177

1 the third-party application as much, but rather, 03:27:37
2 the use of those identifiers in deletion, I don't
3 know that I prepared for that date. But I'm
4 double-checking in my notes.

5 (Exhibit 352 was marked for 03:27:46
6 identification by the court reporter and is
7 attached hereto.)

8 MS. WEAVER: And while you're checking,
9 we have marked as Exhibit 352, a document your
10 counsel produced to us and said you would be 03:27:54
11 prepared to discuss today.

12 It's bearing Bates number ADVANCE-META-8
13 through -9, and the title is "App-Scoped ID (ASID)
14 Conversions."

15 THE DEPONENT: I see that that document 03:28:16
16 is loaded now.

17 Q. (By Ms. Weaver) Do you know when the
18 ASID was first used at Facebook?

19 A. I'm still reading the document.

20 Q. I'm just -- before you're looking at the 03:28:29
21 document, I'm just asking, do you know when the
22 ASID was first used at Facebook?

23 A. I do not know when it was first used at
24 Facebook.

25 Q. And if you were going to find out, how 03:28:38

Page 178

1 would you find out? 03:28:40

2 A. I would look to -- the -- the source of
3 record would be the code -- the code associated
4 with app source, app-scoped IDs.

5 Q. It's knowable, though, right? 03:29:07

6 MR. BLUME: Objection. Form.

7 THE DEPONENT: It should be.

8 Q. (By Ms. Weaver) Okay.

9 A. It should be.

10 Q. Take a moment and let me know when you've 03:29:13
11 had a moment to look at Exhibit 352.

12 A. Okay.

13 Q. Did you review this document in
14 preparation for your deposition?

15 A. I did. 03:30:25

16 Q. And what is it?

17 A. It is a Wiki page titled "App-Scoped ID
18 (ASID) Conversions." It's Revision 24784904 in the
19 Wiki.

20 Q. Okay. And do you see where it says 03:30:57
21 "There are two directions for ASID

22 [REDACTED]. The first one is going from

23 [REDACTED] and the second is going in [REDACTED]

24 [REDACTED]

25 Do you see that? 03:31:09

Page 179

1 A. I do. 03:31:13

2 Q. And underneath that in a bullet point it
3 says [REDACTED] Privacy SEV that should be
4 fixed ASAP."

5 Do you see that? 03:31:21

6 A. I do see that.

7 Q. What is -- what is SEV?

8 A. That is a SEV.

9 Q. And what does it stand for?

10 A. It is -- it -- it is its own noun at 03:31:33

11 Facebook. And a SEV is an incident with some
12 level of -- there is a -- it is a -- it's -- it's
13 our system for tracking things that need to be
14 fixed, and a scale of prioritization attached to
15 it. 03:31:57

16 Q. Okay. And looking a little lower, do you
17 see it says "ASIDs. The intention of ASIDs is to
18 provide 3rd-party applications with [REDACTED]

20 Do you see that? 03:32:17

21 A. I do see that.

22 Q. And that's why ASIDs were created; is
23 that right?

24 A. That is my understanding, yes.

25 Q. And then below it says [REDACTED] 03:32:25

Page 180

1 [REDACTED] programmatically at scale is bad 03:32:27
2 and should be considered a privacy SEV."
3 Do you see that?
4 A. I do see that.
5 Q. And is that true? 03:32:38
6 A. That is -- that is true.
7 Q. Okay. And a little lower it says
8 "Example of Exploitation. A way this could be
9 exploited is if [REDACTED]
10 [REDACTED] [REDACTED] able to be 03:32:52
11 programmatically exploited, [REDACTED]
12 [REDACTED] in order to
13 [REDACTED]
14 which would be bad for a couple of reasons. 1. It
15 would violate users' privacy. 2. It would remove 03:33:07
16 [REDACTED] developers
17 could just [REDACTED]
18 Do you see that?
19 A. I do see that.
20 Q. And is that true? 03:33:19
21 A. Is -- I -- the words that you read are --
22 are on the page, that is true.
23 I think what is -- I -- can you tell me
24 what you're asking?
25 Q. Yeah. 03:33:36

1 Is it true that if apps started sharing 03:33:36
2 data with each other, developers could start
3 sharing and compiling data, which would violate
4 users' privacy, and remove dependence on Facebook
5 Growth and Ads, if developers just circumvent them? 03:33:47
6 A. Yeah.
7 What I -- what I read this as is a
8 theoretical explanation of how this could be
9 exploited if somebody were to do this kind of
10 mapping, and to reinforce the importance of why 03:34:02
11 this happens.
12 This is consistent when -- this is the
13 type of example that's written in regularly in
14 security documentation and other things so that
15 there is an understanding of what could be 03:34:17
16 exploited. So that people have an understanding of
17 what they're trying to build defenses against when
18 they're -- when they're building tools and
19 safeguards.
20 Q. Okay. And looking at the last page and 03:34:29
21 the last paragraph, do you see there's a sentence
22 in bold?
23 A. I do see that sentence in bold.
24 Q. Could you read it, please.
25 A. Sure. 03:34:50

Page 182

1 I'd like to read it in context. 03:34:50

2 So the section is "[REDACTED] is not

3 ideal. Ideally, applications should only have [REDACTED]

4 [REDACTED] explicitly granted them by" user -- "by

5 the user permissions. In this case, the ability 03:35:03

6 for the application to [REDACTED]

7 [REDACTED] is not problematic because the user

8 is knowingly granted permission to this

9 application."

10 THE COURT REPORTER: Hold on. Hold on. 03:35:09

11 THE DEPONENT: "At this point" --

12 THE COURT REPORTER: You're going to have

13 to read slower, please.

14 THE DEPONENT: Oh.

15 THE COURT REPORTER: You need to read 03:35:17

16 slower.

17 THE DEPONENT: Apologies. I can start

18 over.

19 THE COURT REPORTER: No need. Just

20 please read slower. 03:35:20

21 THE DEPONENT: Okay.

22 "In this case, the ability for the

23 application to [REDACTED]

24 [REDACTED] is not as problematic because that user

25 has knowingly granted permission to this 03:35:42

Page 183

1 application. At this point, the ability for the 03:35:44
2 application to [REDACTED] is basically
3 redundant. The bigger problem is making sure" that
4 [REDACTED] without permission in the
5 first place." 03:35:58

6 Q. (By Ms. Weaver) And do you have an
7 understanding as to why ASIDs were created in the
8 first place?

9 A. The [REDACTED] is the canonical source
10 of truth for the user -- [REDACTED]. And 03:36:17
11 as we introduce third-party developers, having the
12 ability to have [REDACTED] that are [REDACTED]
13 [REDACTED] without having to give them the
14 [REDACTED] meant that that never had to be
15 shared with them as the default state. 03:36:41

16 And it also meant that when a user would
17 terminate their relationship for any reason with
18 the third-party developer, that they would not have
19 the user identifiable information of a UID by
20 default as a part of that process. 03:37:00

21 (Exhibit 354 was marked for
22 identification by the court reporter and is
23 attached hereto.)

24 MS. WEAVER: We'll go ahead and mark
25 Exhibit 302 -- oh, strike that. Actually, tab 31. 03:37:18

Page 184

1 And for the record, it's a rather large 03:37:38
2 file.
3 Tab 31 bears the
4 Bates numbers PwC_CPUP_FB00020372 through -381.
5 And I'm only going to ask you questions 03:37:53
6 about some specific pages.
7 A. Okay.
8 What is the exhibit number again?
9 Q. I believe it will be 354.
10 But, again, it's large, so it's probably 03:38:32
11 taking a moment.
12 A. There it is.
13 I know this is on the record. It's
14 really hard when the mouse scroll goes the opposite
15 direction you're used to. Just have to, for the 03:39:35
16 record, say that.
17 Q. Are you left-handed or is it --
18 A. I'm -- I'm usually left-handed, but it's
19 like when you scroll up, it goes down and in the
20 opposite -- 03:39:46
21 Q. Oh, yeah. Let's get it --
22 A. I do have it open now.
23 Q. Great.
24 So you can flip through it.
25 The first question is, what is 03:39:55

Page 185

1 Exhibit 354? 03:39:56

2 And I'll tell you, I'm going to ask

3 you -- well, let me know when you're ready.

4 A. Okay.

5 In answering the question of what this 03:42:05

6 is, it is an email from Spencer Kindt to

7 Louis C. Larrus. Spencer Kindt from Facebook,

8 Louis C. Larrus of PwC, dated 10/9/2013.

9 And I don't know whether the right phrase

10 would be montage or potpourri of code samples, 03:42:33

11 screenshots, emails, user ID, examples from a

12 cvikram. Content that was in a Box folder and the

13 PDF containing all the contents of that folder.

14 Q. Okay. And so is it fair to say that code

15 begins on or around page -1260 -- the page ending 03:43:01

16 at -1260 in the document?

17 MR. BLUME: Objection. Form.

18 THE DEPONENT: It depends on your

19 definition of code. There's a -- there's some code

20 on page 12 and 13. 03:43:23

21 Q. (By Ms. Weaver) When you say 12 and 13,

22 would you mind using the Bates number?

23 A. Oh, I apologize.

24 Q. No problem.

25 A. I'm using the page number. 03:43:34

Page 186

1 Q. Yeah. 03:43:36

2 A. There is a chronsript on

3 Bates page -21261.

4 Q. Great.

5 A. And then actual page v code starting on 03:43:46

6 -21262.

7 Q. What's a chronsript?

8 A. It's a script that runs on a -- on a

9 regular basis with a schedule. And so it's -- it's

10 a -- it's a scheduling tool for scheduling jobs. 03:44:05

11 Q. Is [REDACTED] a chronsript?

12 MR. BLUME: Objection. Form.

13 THE DEPONENT: What I'm looking at on

14 this page is not [REDACTED]. It's the

15 [REDACTED] that's highlighted on line 73 on 03:44:28

16 that page. That was scheduled to run at 5 after

17 2:00 a.m., 8:00 a.m., 2:00 p.m. and 8:00 p.m. every

18 day.

19 Q. (By Ms. Weaver) Understood.

20 But is [REDACTED] also a chron- -- 03:44:46

21 chronsript but runs routinely, or how does it run?

22 A. It is a process that is called --

23 I don't -- I don't know the -- I don't know if --

24 that it's specifically run [REDACTED] because it's

25 an [REDACTED], as 03:45:01

1 | opposed to this being older in our infrastructure 03:45:04

2 | where the way to

3 Q. Okay. And how are they scheduled now?

4 A. I didn't specifically prepare for that.

5 But just -- it's -- we have more modern 03:45:17

```
6 | tools that -- as -- as opposed to chronsceipts that
```

7 | ran in this way. So that we can monitor when they

```
8 | start, that they start, validate that they start
```

```
9 |         and -- and get completions.
```

10	I just don't remember the name of the	03:45:29
----	---------------------------------------	----------

```
11 | tool that's built for that.
```

12	Q. Thank you.
----	---------------

13 And you said then code begins at

14 page -262; is that right?

15	A. That is correct.	03:45:39
----	---------------------	----------

16 Q. And what's your understanding of why code

17 was being provided to PwC here?

18 MR. BLUME: Objection. Form. Beyond the

19	scope.
----	--------

20	THE DEPONENT: I -- I don't see any	03:45:51
----	------------------------------------	----------

```
21 | context on -- the only context I see in the email
```

```
22     is "Here's the latest stuff from Box."
```

23 Q. (By Ms. Weaver) Okay. And are you

24 prepared to discuss today how data is associated

25	with users through pixels?	03:46:10
----	----------------------------	----------

1 MR. BLUME: Objection. Form. 03:46:19

2 THE DEPONENT: Could you be more
3 specific in -- in the question.

4 Q. (By Ms. Weaver) I don't know how to be
5 more specific. 03:46:28

6 A. Okay.

7 Q. The topic identified was -- included
8 Facebook's processes of association of user data
9 and information, and I had expressly emailed about
10 pixels. 03:46:41

11 Are you prepared to talk about how pixels
12 function?

13 A. Do you have -- if you've got a specific
14 question, I can let you know if I'm prepared for
15 that or not. I believe I'm prepared, but... 03:46:54

16 Q. Sure.

17 Turn to the Bates number ending in
18 -303 -- I'm sorry. -305.

19 A. I'm at -305.

20 I will quickly read this. 03:47:42

21 Q. Sure.

22 A. Okay. I've read this page, which appears
23 to be a proposal to the privacy XFN board.

24 Q. And what is the [REDACTED]

25 A. In here, it's identified as an [REDACTED] 03:49:25

Page 189

1 [REDACTED] 03:49:29

2 Q. Are you familiar with [REDACTED] other than
3 this document?

4 A. I'm not.

5 Q. Okay. 03:49:35

6 A. I have not come across that. I -- I also
7 don't know if this was adopted or not, as this was
8 a proposal.

9 Q. Okay. Why don't we turn to the page
10 ending at -307. 03:49:49

11 A. Okay.

12 Okay.

13 Q. Do you need a second to review it?

14 A. I'm reviewing it right now.

15 Q. Are you familiar with the process of 03:50:33

16 [REDACTED] between Facebook and
17 data partners?

18 A. I am in personal experience.

19 Q. And what do you know about it?

20 A. I know that we've -- for -- how I'm 03:51:02

21 familiar with it is how we've integrated in the
22 past for types of privacy safe matching similar to
23 what's proposed here is -- is -- is what's been my
24 experience and what I'm familiar with it around it.

25 Q. Okay. When are you aware that [REDACTED] 03:51:33

Page 190

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

[REDACTED] [REDACTED]
[REDACTED]
A. I do not know.
MR. BLUME: Objection. Objection. Form.
Q. (By Ms. Weaver) Do you know if it's 03:51:45
still going on?
MR. BLUME: Objection. Form. Scope.
THE DEPONENT: I do not know.
Q. (By Ms. Weaver) When data was received
from data brokers and then matched to Facebook 03:51:58
data, where did that data go and how -- and is it
part of the deletion process?
MR. BLUME: Objection. Form.
THE DEPONENT: Third-party data for the
deletion process has its -- has its own retention 03:52:24
policy. It's also stored in a way that it
itself is not directly identifiable but can only be
matched with a series of hashes. And so it,
itself, by itself, is not user identifiable, as
it's stored, hashed in ways similar to what is 03:52:48
described in this example.
It would require there to be an exact UII
that has been hashed to see if it matches with the
existing hashed storage.
Q. (By Ms. Weaver) And is that data then 03:53:08

1 associated with a specific user in a way such that 03:53:11
2 if it were -- well -- is hash -- no, strike that.
3 Is matched data re-associated with
4 Facebook users through pseudonymize --
5 pseudonymized identifiers at some point? 03:53:30
6 MR. BLUME: Objection. Form. And scope.
7 THE DEPONENT: The -- and just speaking
8 from personal experience on that, the -- and to
9 walk through and give a synthetic example of what a
10 hash is, to help explain that, because I don't 03:54:02
11 think I can answer that question -- and maybe you
12 can ask it slightly different after I explain how a
13 hash works.
14 If my name is Mike and I hash that, that
15 hash might end up with 7654321 as the number that 03:54:15
16 represents what Mike was. That 7654321 is what
17 would be stored. It is not UII. It's not
18 identifiable.
19 If I wanted to match, to see if something
20 matched for Mike, I wouldn't be able to attach Mike 03:54:40
21 and say that. I would need to generate a hash and
22 then see if the hashes match.
23 And so as 7654321 is not user
24 identifiable, it wouldn't -- there -- there --
25 it -- it wouldn't -- it would fall under natural 03:54:59

1 del- -- or retention policies, but would be stored 03:55:03
2 in that context -- or in -- in its form. And there
3 wouldn't be a need to de-identify it, as it's not
4 user identifiable information in the hash itself.

5 And so could you clarify the question you 03:55:19
6 were asking?

7 Q. (By Ms. Weaver) Is that data then, at
8 some point, later re-associated with Facebook
9 users?

10 MR. BLUME: Objection. Form. 03:55:43

11 THE DEPONENT: In this third-party data
12 example, we wouldn't have the salt or the key to
13 unlock the hashes. We would only be able to match
14 if we had that same data and put it in a similar
15 hash to then see if it matched. And so 03:56:05
16 prohibitively by itself there isn't re-association
17 on data itself in that form because we don't
18 possess the key to it in the scenario that's --
19 that's on the document in front of me.

20 Q. (By Ms. Weaver) Setting aside what's in 03:56:23
21 the document in front of you, do you know if
22 Facebook, at any point, acquired the key to be able
23 to re-identify such data back to Facebook users?

24 MR. BLUME: Objection. Form. And scope.

25 THE DEPONENT: I'm not aware. 03:56:41

1 MS. WEAVER: Okay. Let's mark 03:56:45
2 Exhibit 302 [sic]. And actually -- actually, while
3 that's loading, mark tab 88.
4 (Exhibit 355 was marked for
5 identification by the court reporter and is 03:57:20
6 attached hereto.)
7 MS. WEAVER: Sorry, Josh. I hit you with
8 two at once.
9 THE DEPONENT: While those are loading,
10 may I take a few-minute break? 03:57:37
11 MS. WEAVER: Yes. Why don't we go off
12 the record.
13 THE VIDEOGRAPHER: Okay. We're off the
14 record. It's 3:57 p.m.
15 (Recess taken.) 03:58:01
16 THE VIDEOGRAPHER: Okay. We're back on
17 the record. It's 4:14 p.m.
18 Q. (By Ms. Weaver) In -- Mr. Clark, you
19 understand you're still under oath, correct?
20 A. Yes, I do. Yes. 04:14:55
21 MS. WEAVER: In your absence, we marked
22 Exhibit 356.
23 (Exhibit 356 was marked for
24 identification by the court reporter and is
25 attached hereto.) 04:15:01

1 MS. WEAVER: And for the record, it bears 04:15:03
2 Bates numbers ADVANCE-META-23 to -25, and reads
3 "[REDACTED]" on top.
4 THE DEPONENT: Okay.
5 Q. (By Ms. Weaver) What is Exhibit 356? 04:15:16
6 A. 356 is a Wiki page from the internal
7 Facebook engineering Wiki titled [REDACTED]
8 [REDACTED] And it's
9 Revision No. 51885342.
10 Q. And what is -- and what does the document 04:15:47
11 reflect, in general?
12 A. It's talking about the -- as part of the
13 overall deletion framework, there -- the -- the --
14 just -- the workers of the deletion framework that
15 actually do the deletion, from a software 04:16:03
16 perspective, are called deleters. And this walks
17 through -- talking through what deleters are and
18 examples of what those deleters are.
19 Q. And do you see a reference to "recording
20 of restoration data" here? 04:16:19
21 It's the second bullet.
22 A. The second bullet under "What Do They
23 Do?"
24 Q. Yes.
25 A. Yes, I do. 04:16:37

1 Q. What is the recording of restoration 04:16:37
2 data?

3 A. As the deletion process kicks off, the --
4 the broader deletion framework, if I were to

5 [REDACTED] almost simul- -- 04:16:51
6 almost instantly [REDACTED]

7 [REDACTED] the Facebook application or
8 Facebook platform.

9 But there's a lot of work to do behind
10 the scenes for these [REDACTED] [REDACTED]

11 [REDACTED] Like for [REDACTED] not just [REDACTED]

12 [REDACTED]

13 [REDACTED]

14 And so in the process of making that

15 [REDACTED] I'm -- as a user, I'm given 04:17:22

16 a period of time that I can choose not to delete or

17 reactivate my account [REDACTED]

18 And so in order to be [REDACTED] I need

19 to know what the [REDACTED]

20 [REDACTED]. 04:17:41

21 Q. Okay. Got it.

22 And looking, just for a second, back at

23 347, [REDACTED]

24 [REDACTED] [REDACTED]

25 [REDACTED] 04:18:01

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

[REDACTED] [REDACTED]

[REDACTED]

MR. BLUME: Objection. Form.

THE DEPONENT: Could you -- could you ask
that one more time. And I'm -- I'm -- I want to
make sure I understand it. 04:18:20

Q. (By Ms. Weaver) Once an [REDACTED]
[REDACTED] is it possible to reach all of the data by
searching for the [REDACTED] previously would
have been able to find with -- strike it. Let me
try it again. 04:18:37

Once an [REDACTED] is it
possible to reach all of the data using the [REDACTED]
that you might have been able [REDACTED]
[REDACTED] 04:18:59

MR. BLUME: Objection. Form.

THE DEPONENT: Okay. It -- that feels
like two questions because I want to make sure I
answer that.

And so the first part is, when a [REDACTED] [REDACTED]
[REDACTED] is the moment an [REDACTED]
created and so that's -- that's from -- from day
one. No [REDACTED] has occurred at that
point because the [REDACTED] haven't happened.
After [REDACTED] activity, things that 04:19:32

1 are -- some of the metadata -- and just the 04:19:37
2 metadata that [REDACTED] would have [REDACTED]
3 run against it at -- at -- so it's done by [REDACTED]
4 So at [REDACTED] it would kick off, and the [REDACTED]
5 [REDACTED] in logs or some of that kind of 04:19:57
6 information in [REDACTED]
7 And the question was, can the [REDACTED] be used
8 to [REDACTED] information?
9 While an account is active
10 [REDACTED] allows for the [REDACTED] [REDACTED]
11 [REDACTED] The active process of [REDACTED] n or
12 [REDACTED] occurs when an
13 account is deleted. And so once that account is
14 deleted, that [REDACTED] is not [REDACTED] because there is
15 only the one point of [REDACTED] the [REDACTED] [REDACTED]
16 [REDACTED] that we had spoken about, that is the only
17 [REDACTED] And so it's not [REDACTED]
18 [REDACTED]
19 It also like from a -- from a privacy
20 perspective, would go against any violation to 04:20:59
21 maintain any other mapping. And that's also at the
22 heart of the rationale why we go through and
23 eliminate UII from these files as well to prevent
24 that mapping from -- from -- from -- that user
25 identifiable information from being able to make 04:21:22

Page 198

1 that identity in any way. 04:21:24

2 Q. (By Ms. Weaver) Okay. I guess my
3 question was a little unclear.

4 At any point prior to the time the
5 account is deleted, is the [REDACTED] perfect [REDACTED] 04:21:40
6 for the [REDACTED] terms of the scope of the data [REDACTED]
7 [REDACTED]

8 A. The [REDACTED] [REDACTED] the scope of the data it
9 [REDACTED]

10 The [REDACTED] is only in data that sits in [REDACTED] 04:22:04
11 that has been [REDACTED] And so I don't know what
12 you mean by the "scope of the data."

13 Q. Okay. For the -- I'm going to ask some
14 ugly questions, and then I'll try to clean it up
15 later and try to communicate with you. 04:22:22

16 A. Okay.

17 Q. So what I'm trying to understand is --
18 yes, let's limit it to the [REDACTED] data in [REDACTED]
19 [REDACTED]

20 Is there any way in which, when the [REDACTED] [REDACTED]
21 [REDACTED] there is some subset of the data
22 within [REDACTED] that cannot [REDACTED]
23 [REDACTED]

24 That's what I mean by perfect substitute.

25 Does that make sense? 04:22:49

Page 199

1 MR. BLUME: Objection. Form. 04:22:51

2 THE DEPONENT: It -- I think it does.

3 And that scenario is intentionally -- like that
4 that's why the product is architected the way it
5 is, to swap [REDACTED] [REDACTED]

6 [REDACTED] And then having the user information, the
7 [REDACTED] in that same process
8 of [REDACTED]

9 And so I -- the -- the scenario you're
10 talking about is not part of what's engineered. 04:23:24

11 Q. (By Ms. Weaver) Right.

12 So in conclusion, once [REDACTED]
13 [REDACTED] it is likely that it will be very difficult to
14 [REDACTED] is that
15 fair? 04:23:56

16 MR. BLUME: Objection. Form.

17 THE DEPONENT: The -- that's more to --
18 to tear apart there.

19 The -- when you say "all data," could --

20 Q. (By Ms. Weaver) Assume I'm talking about 04:24:10
21 all the data --

22 A. Could we be specific and maybe --

23 Q. Sorry.

24 Assume I'm talking about all the data in
25 Hive, just for now, data warehouse. 04:24:16

Page 200

1 A. Okay. Then please ask the question 04:24:18
2 again.
3 Q. Well, strike that.
4 Is [REDACTED] also used for TAO?
5 MR. BLUME: Objection. Form. 04:24:27
6 THE DEPONENT: [REDACTED] exists in the [REDACTED]
7 [REDACTED] that we had mentioned before, which is --
8 contains the [REDACTED] [REDACTED] is only
9 [REDACTED] which is only
10 [REDACTED] 04:24:42
11 Q. (By Ms. Weaver) Does [REDACTED] exist in TAO?
12 MR. BLUME: Objection. Form.
13 THE DEPONENT: [REDACTED] only exists in the
14 [REDACTED] that does the [REDACTED] It is
15 TAO -- TAO, being for internal Facebook developers, 04:24:57
16 [REDACTED]
17 MS. WEAVER: Thank you.
18 Q. (By Ms. Weaver) So for only the dataset
19 where Facebook [REDACTED]
20 [REDACTED]
21 [REDACTED]
22 [REDACTED]
23 MR. BLUME: Objection. Form.
24 THE DEPONENT: If by more difficult you
25 mean less efficient or technically feasible, it is 04:25:40

Page 201

1 less efficient because you have to look up the [REDACTED]
[REDACTED] for anything that you're trying to
3 do analysis on while the account is still active.

4 Whereas, before you would be able to

5 [REDACTED] from a technical 04:26:05

6 efficiency perspective. So while the account is

7 still active, [REDACTED] When that

8 account is no longer active, the mechanism [REDACTED]
[REDACTED]
[REDACTED]

04:26:22

11 The -- the process of pseudonymization
12 made it so that there is only the one string that
13 connects RID back to the user. And once that
14 string is cut, there is no other tie because the
15 UII has been eliminated. 04:26:41

16 Q. (By Ms. Weaver) And when you say "when
17 the account is no longer active," are you referring
18 to [REDACTED] or are you referring to [REDACTED]
[REDACTED]

20 A. I should have been precise and specific 04:26:55

21 and meant [REDACTED]

22 MS. WEAVER: Okay. Great.

23 Thank you.

24
25 ///// 04:27:03

Page 202

1 (Exhibit 357 was marked for 04:27:03
2 identification by the court reporter and is
3 attached hereto.)

4 (Exhibit 358 was marked for
5 identification by the court reporter and is 04:27:03
6 attached hereto.)

7 MS. WEAVER: Please take a look at
8 Exhibits 357 and 358, which are actually associated
9 with each other.

10 Exhibit -- for the record, Exhibit 357 is 04:27:14
11 the email and family associated with the native
12 file at Exhibit 358.

13 And for the record, these documents bear
14 Bates numbers FB-CA-MDL-03233363 through -65.

15 And Exhibit 358 is the native file. And 04:27:42
16 we're not going to put up Exhibit 358 on the
17 screen, but it might be a little bit difficult for
18 to navigate.

19 Actually, if we can put it on the screen
20 that might be good. 04:28:00

21 Josh, do you want to try it? I know that
22 you're freezing.

23 Q. (By Ms. Weaver) And I guess you might
24 want to start with Exhibit 357, Mr. Clark. And
25 I'll just ask you what is it, when you have a 04:28:30

1 chance. 04:28:33

2 A. Okay.

3 Apologies. This is taking a while.

4 There's a lot of content here.

5 Q. No problem. 04:30:18

6 A. All right. 357 appears to be an email

7 between Ayana Miller and Privacy PM, dated

8 September 9th, 2015, where Ayana, in sending to

9 Privacy says "It's time to close out August

10 products. Please make sure you've checked all of 04:31:03

11 your TBDs and products listed with August launch

12 dates" and "see whether they launched and" updates

13 according -- "accordingly by end of day next

14 Tuesday. We are planning on picking products for

15 audit leader next week." 04:31:15

16 THE DEPONENT: Oh, I apologize for

17 reading that so fast.

18 Do you need me to redo that?

19 THE COURT REPORTER: No.

20 THE DEPONENT: Okay. 04:31:20

21 MS. WEAVER: She would have let you know
22 probably.

23 But it's near the end, you'll both be

24 happy to know.

25 Q. (By Ms. Weaver) Who -- who is 04:31:29

Page 204

1 Anna Ruecker; do you know her? 04:31:32

2 A. I do not.

3 Q. Okay. Do you know what a product

4 closeout reminder is?

5 MR. BLUME: Objection. Form and scope. 04:31:46

6 And I don't think this document was among

7 the ones you sent.

8 MS. WEAVER: That's because I just

9 received it. It was loaded on Saturday.

10 THE DEPONENT: I do not know what product 04:31:59

11 closeout reminder is for August. I can only

12 infer -- infer -- actually, I -- there's not enough

13 context in here to really infer what -- what that

14 means.

15 Q. (By Ms. Weaver) Okay. And turning to 04:32:11

16 the Excel spreadsheet.

17 A. Okay.

18 Is there a specific row?

19 Q. Sure. Let's start with row 8B.

20 A. The custom segment creation via 04:32:53

21 off-Facebook surveys?

22 Q. Yes.

23 A. Okay.

24 Q. And I'm actually looking at -- I'm trying

25 to identify the cell. So 8B, as in boy. 04:33:00

Page 205

1 A. Understandable. 04:33:03

2 Q. Perfect.

3 And let me know when you've had a

4 second -- a second to look at it.

5 A. Okay. 04:34:10

6 Q. What is a segment ID?

7 MR. BLUME: Objection. Form. Scope.

8 THE DEPONENT: It -- [REDACTED] wasn't

9 something I had prepared or researched before this,

10 and so I -- I don't specifically know what that's 04:34:35

11 referring to in this context.

12 Q. (By Ms. Weaver) Okay. So Exhibit 8B

13 describes the creation of [REDACTED]

14 [REDACTED]

15 [REDACTED] 04:34:56

16 Is that a fair description of what it

17 says in this cell?

18 A. That is a fair description of what it

19 says in this cell.

20 Q. And then it says in the cell at step 2, 04:35:08

21 [REDACTED]

22 [REDACTED]

23 Do you see that?

24 A. I do see No. 2, yes.

25 Q. And then it says [REDACTED] [REDACTED] 20

1

2

3

Do you see that?

4

A. I do see that.

5

Q. So do you know whether, in this scenario,

04:35:30

6

Facebook

7

and stored it?

8

MR. BLUME: Objection. Form. And scope.

9

THE DEPONENT: I could not say -- I -- as

10

I don't know that answer.

04:35:47

11

Q. (By Ms. Weaver) So you're not -- that's

12

okay.

13

So you're not prepared to testify about

14

how Facebook associates the off-platform data to

15

the Facebook user ID; is that fair?

04:35:59

16

MR. BLUME: Objection. Form.

17

THE DEPONENT: In -- in the context of

18

deletion and off-Facebook associations on how this

19

would be stored, I'm prepared to talk about. I

20

just am not familiar with the specific scenario.

04:36:20

21

Q. (By Ms. Weaver) How does the Facebook

22

conversion pixel work?

23

MR. BLUME: Objection. Form. Scope.

24

THE DEPONENT: Is there a specific

25

question around that?

04:36:33

Page 207

1 Q. (By Ms. Weaver) Well, I identified data 04:36:34
2 associated through the pixel in my email.

3 This specific example talks about how the
4 partner under contract issues survey off Facebook
5 with Facebook conversion pixel, and I'm wondering 04:36:49
6 if you had the ability to testify as to how that
7 functions?

8 MR. BLUME: Objection. Form.

9 THE DEPONENT: I -- I know it broadly in
10 my own experience and -- and can talk to it 04:37:04
11 generically. But I just am not familiar with this
12 specific scenario.

13 Q. (By Ms. Weaver) Okay. What can you talk
14 to generically?

15 MR. BLUME: Objection. Form. And scope. 04:37:17

16 THE DEPONENT: How I -- the -- the
17 elements I can talk to and the elements I'm
18 familiar with are what the IDs are that are stored
19 and how -- how they are either pseudonymized or
20 de-identified, or the information in the processes, 04:37:33
21 and how that information is handled in the deletion
22 process.

23 I don't think I'd be able to talk to
24 enough specificity on an example like this.

25 Q. (By Ms. Weaver) Okay. Look at cell 14B, 04:37:51

1 as in boy. And while you're looking, I'll read it 04:37:54

2 into the record.

3

Response	Percentage
Yes	3
No	97

13 Do you see that in cell 14B?

14 A. I do see that in 14B.

15	Q. Are you familiar with how clean -- how	04:38:34
16	data is [REDACTED]	

18 MR. BLUME: Objection. Form. And scope.

19 Q. (By Ms. Weaver) And if it helps, I'll
20 direct you to cell 14F, which refers to use of the 04:39:11
21 [REDACTED], as part
22 of this process.

23 A. I'm not familiar with this clean room
24 process.

25 Q. Do you know who may be -- oh, I'm sorry. 04:40:06

1 A. I -- as -- especially as -- and I -- I 04:40:10

2 just want to make sure we go back to 357 in the

3 setup for this spreadsheet -- that these were

4 proposed products. And I'm just -- I -- I don't

5 know that these are -- I -- I -- I am not familiar 04:40:32

6 with that scenario and I'm not seeing that scenario

7 in practice. So I wouldn't be able to talk to that

8 one.

9 And as I have not seen it, I -- I would
10 only -- when asked for a name, would only be able 04:40:45
11 to point to the name of the person that's on the
12 sheet as the privacy PM that worked -- that had
13 worked this at that time.

14 Q. Okay. Looking at row 36A, are you
15 familiar with the practice of [REDACTED]
[REDACTED] ?

17 MR. BLUME: Objection. Scope.

18 THE DEPONENT: I understand the technical
19 components of what's described here, but I'm not
20 familiar with this exactly existing in production. 04:41:52
21 So I wouldn't be able to talk to it.

22 Q. (By Ms. Weaver) How about row 40,
23 cell 40A describes training translation systems
24 using message to pages.

25	MR. BLUME: Objection. Scope.	04:42:07
----	------------------------------	----------

1 Q. (By Ms. Weaver) And it says "To improve 04:42:08
2 our machine translation systems, creating two sets
3 of messages to pages."

4 Do you see that?

5 And then it says [REDACTED] [REDACTED]
[REDACTED] [REDACTED]."

7 Do you have any involvement with that?

8 MR. BLUME: Objection. Scope.

9 THE DEPONENT: I do not. And I'm not
10 familiar with that operating today. 04:42:43

11 Q. (By Ms. Weaver) Give me just two
12 seconds.

13 Are you familiar with the [REDACTED]

14 A. Which line is that on?

15 Q. 7F. 04:43:14

16 MR. BLUME: Objection. Form. And scope.

17 THE DEPONENT: Not in preparation for
18 this, but in -- just my normal -- is myself in --
19 personal experience.

20 I am familiar with the [REDACTED] just 04:44:01
21 meaning that when somebody [REDACTED]

[REDACTED] there is a -- there is a [REDACTED]
23 put in place.

24 So that if somebody had [REDACTED]

[REDACTED] 04:44:12

1 that it still knows to go back in and [REDACTED] [REDACTED]
[REDACTED]
3 Q. (By Ms. Weaver) Okay. Look at --
4 A. The rest of -- the rest of this, I -- I'm
5 not familiar with. 04:44:25
6 Q. Okay. Apologies.
7 Look at row 6A.
8 Were you familiar with Facebook
9 [REDACTED]
[REDACTED] 04:44:38
11 MR. BLUME: Objection. Scope.
12 THE DEPONENT: I am not familiar with
13 that.
14 Q. (By Ms. Weaver) What is [REDACTED]
[REDACTED]
16 A. I do not know.
17 Q. Do you know who might know?
18 A. Edward Esslemont, the name in the sheet.
19 Q. Yeah.
20 Okay. What's a custom audience match 04:45:02
21 rate?
22 Do you know?
23 MR. BLUME: Objection. Scope.
24 THE DEPONENT: I didn't prepare for that
25 as part of this, and I -- I don't actually know 04:45:12

Page 212

```
1 | what the custom audience match rate is.                                04:45:15
```

2 MS. WEAVER: Okay. I think that's it. I

3 think we have no more -- further questions for this

4 witness. We are not closing the topic or the

5	notice.	04:45:33
---	---------	----------

6 Mr. Clark, thank you very, very much, and

7 | I hope you feel better.

8 THE DEPONENT: Thank you.

9 THE VIDEOGRAPHER: Okay to go off the

10	record?	04:45:44
----	---------	----------

11 MS. WEAVER: Yes.

12 MR. BLUME: Are we off the record?

13 THE VIDEOGRAPHER: Okay. Sure. We're

14 off the record. It's 4:45 p.m.

15	(Recess taken.)	04:46:22
----	-----------------	----------

16 (Exhibit 359 was marked for

17 identification by the court reporter and is

18	attached hereto.)
----	-------------------

19 THE VIDEOGRAPHER: We're back on record.

20	It's 4:57 p.m.	04:57:17
----	----------------	----------

21 Q. (By Ms. Weaver) Mr. Clark, have you had

22 the opportunity to review what has been marked as

23	Exhibit 359?
----	--------------

24 MS. WEAVER: It bears Bates numbers

25	ADVANCE-META-66 through -69.	04:57:28
----	------------------------------	----------

1 And for the record, on the break, 04:57:35
2 counsels produced it to us. It was a document in
3 the hyperlink of the earlier exhibit.

4 THE DEPONENT: And for clarity, this is
5 the link -- I just want to make sure I know what 04:57:47
6 this is -- this is the linking from which
7 Exhibit -- which earlier exhibit? It was the --

8 MS. WEAVER: Exhibit 348.

9 THE DEPONENT: 348.

10 MS. WEAVER: Is that correct, Counsel? 04:58:00

11 MR. BLUME: I trust you, but hang on.

12 MS. WEAVER: Well, I don't know that this
13 is the link.

14 MR. BLUME: Yes, this is link -- yes.
15 This is the link under what is -- UII redirect to 04:58:09
16 link privacy/UII_definition_0 is -- the link --
17 that link brings us to Exhibit 359.

18 Q. (By Ms. Weaver) So Mr. Clark, what is
19 Exhibit 359, in your understanding?

20 A. Exhibit 359 is a Wiki page from the 04:58:35
21 Facebook internal Wiki, titled "UII Definition,"
22 Reversion 48265038.

23 Q. And when was the last time you saw this
24 document?

25 A. Right now, as I'm looking at it. 04:59:01

1 Q. Have you reviewed this link document 04:59:04

2 before?

3 A. I did not review this link document

4 before today.

5 Q. And do you understand this document to 04:59:18

6 set forth --

7 A. I -- I -- I want to correct the record.

8 I've seen this before. I've used it in

9 the course of business. But for the sake of

10 preparation and deeper understanding. 04:59:26

11 Q. That's what I was asking.

12 So does Exhibit 359 set forth Facebook's

13 definition of UII?

14 A. It -- it is on the privacy Wiki as -- as

15 the definition -- policy definition of UII. 04:59:51

16 Q. And beginning at what point in time was

17 this the definition for Facebook of UII?

18 A. I'm going to refer just to my notes for a

19 moment to see if I made note of that.

20 I don't know when that shift occurred. I 05:00:30

21 do know that as of 2010, we still referred to it as

22 PII -- or we still -- we still used PIIs as the

23 basis. It was some point after that where UII was

24 adopted. I just do not know when.

25 Q. And what's your understanding of the 05:00:45

Page 215

1 distinction between PII and UII? 05:00:47

2 A. UII is Facebook's specific definition
3 of -- which is broader than PII, which is adopted
4 more industry-wide. But has specific meaning in
5 the context of ads versus other types of
6 industries.

05:01:09

7 And for our own sake built the definition
8 of UII to be inclusive of the types of data and
9 things that we had.

10 Q. So specifically, what is the definition? 05:01:25

11 A. UII, originally an acronym for user
12 identifiable information, refers to types of data,
13 or combinations of types of data, which could be
14 used uniquely to identify a person, account, or
15 device, or to relink data to a person, account or
16 device.

05:01:41

17 Q. And do you have an understanding of what
18 personal information is, in Facebook's view?

19 A. I'm -- I'm going to read from the
20 document for that.

05:02:35

21 In the third paragraph, in the section
22 labeled [REDACTED]

23 [REDACTED] third paragraph starts

24 "Additionally, it is important to note that [REDACTED]

25 does not directly map to 'personal information'

05:02:50

Page 216

1 (under CCPA) or other similar legal terms. 05:02:54

2 Instead, it is a category assigned to [REDACTED]

3 [REDACTED]

4 [REDACTED] as per

5 our commitments and obligations. 05:03:10

6 "It is entirely possible for a particular
7 piece of data to be [REDACTED] because of its
8 type even though it may not necessarily constitute
9 'personal information' when examined by itself."

10 Q. Personal -- 05:03:37

11 A. "For example" --

12 Q. I'm sorry.

13 Go ahead.

14 A. "For" -- I'm just reading it slow to make

15 sure -- "For example, [REDACTED] is a 05:03:42

16 [REDACTED] regardless of whether any" [REDACTED]

17 [REDACTED]

18 [REDACTED]

19 Q. Do you have an understanding that the

20 definition of personal information, under the 05:04:08

21 CCPAA, is any information that can be reasonably

22 linked or associated with an individual?

23 MR. BLUME: Objection. Calls for a legal

24 conclusion. Form.

25 THE DEPONENT: I -- I -- I -- that one, I 05:04:42

Page 217

1 can't answer that. But I can answer that I believe 05:04:43
2 that's part of why we make UII even broader.

3 Q. (By Ms. Weaver) Broader than what?

4 A. Specific -- when you get to the
5 definition of UII meaning both types of data, but 05:04:55
6 combinations of types of data.

7 Q. Okay. As you sit here today, can you
8 state what personal information is under the CCPAA,
9 as referenced in this document?

10 MR. BLUME: Objection. Form. Scope. 05:05:18
11 Calls for a legal conclusion.

12 THE DEPONENT: I -- I can't quote the
13 CCPA off the top of my head.

14 Q. (By Ms. Weaver) So you don't know what
15 the definition of "is personal information under 05:05:28
16 the CCPA" as referenced in this document?

17 A. As -- as I just am seeing this document
18 for myself, I -- I'm familiar with personal
19 information under CCPA, but just don't -- don't
20 have that analysis or didn't prepare for -- to 05:05:45
21 answer that question.

22 Q. Do you know what personal infor- -- how
23 personal information is defined under the CCPA?

24 MR. BLUME: Objection. Calls for a legal
25 conclusion. Form. And scope. 05:06:03

Page 218

1 THE DEPONENT: I -- I don't know how to 05:06:15
2 answer that.

3 I -- in -- in my personal experience, I
4 would work with product counsel and counsel. And
5 in that definition, I -- I -- as I said, I did not 05:06:24
6 prepare to have an answer for that today.

7 Q. (By Ms. Weaver) Okay. So it's really --
8 this really is very simple. It's a yes-or-no
9 question.

10 As you sit here today, can you define 05:06:33
11 personal information under the CCPA?

12 MR. BLUME: Same objections.

13 THE DEPONENT: I'm -- I'm truly
14 struggling to answer that, but -- I have prepared
15 context. But I can't answer yes or no to that. 05:06:43

16 Q. (By Ms. Weaver) Isn't the answer "no,"
17 that you don't know, as you sit here today, how
18 CCPA defines personal information?

19 A. I do in my personal experience and as I
20 work as a product manager day-to-day, but I do so 05:06:57
21 with guidance and direction from counsel. And I --
22 I didn't -- I don't have a prepared answer or
23 didn't prepare to answer it in this context.

24 Q. Well, what is your personal understanding
25 of what personal information is under the CCPA? 05:07:11

Page 219

1 A. As I said, I've worked with counsel on 05:07:32
2 that. I just -- I don't have it at the end of the
3 day for you.

4 If -- if you'd like to put it up, I can
5 read what it is. I just -- I don't have that 05:07:40
6 answer right here in front of me.

7 Q. Okay. So that's fine.

8 | So the answer is you don't know, right?

9 MR. BLUME: Same objections.

10 THE DEPONENT: As a representative of 05:07:52
11 Facebook, I didn't prepare to answer that. In my
12 personal experience, I work with it. But I -- I
13 just -- I can't articulate it right now. So I --

14 Q. (By Ms. Weaver) So the answer is, as you
15 sit here right now, you don't know what the 05:08:11
16 definition of personal information under the CCPA
17 is, correct?

18 In your personal or in the corporate
19 capacity; is that right?

20	MR. BLUME: Objection. Scope.	05:08:21
----	------------------------------	----------

21 You can answer yes or no in your personal
22 capacity.

23 THE DEPONENT: In -- in my personal
24 capacity, I work with product counsel on a regular
25 basis on the definition of what personal 05:08:31

1 information is under CCPA, which is a long and 05:08:33
2 nuanced answer in the context of working with that
3 data every day, because I have come up with and
4 developed that definition under guidance and
5 direction of counsel. 05:08:45

6 In my personal experience, I -- I -- I
7 did not prepare to answer that question, so I
8 cannot answer that I don't know.

9 Q. (By Ms. Weaver) Okay. Well, so -- we
10 have a 30(b)(6) deposition here. You've asked for 05:09:03
11 this document that refers to personal information
12 under CCPA, which is part of the definition of UII,
13 which is within the scope of what data is deleted,
14 and I'm just answering -- I'm just asking, for
15 the jury, can you tell me today, as you sit here, 05:09:20
16 how does Facebook define personal information?

17 MR. BLUME: Objection. Form. And scope.
18 And calls for a legal conclusion under the CCPA.

19 THE DEPONENT: And I -- I really am
20 trying to be responsive. And that's why I'm making 05:09:39
21 sure that it's on the record that I'm answering
22 that I don't know. In --

23 Q. (By Ms. Weaver) Okay.

24 A. -- preparation for this, I came prepared
25 to answer the things related to question 4. And 05:09:48

Page 221

1 am -- am not counsel and can't make a legal 05:09:52
2 conclusion to that.

3 Q. I'm not asking for a legal conclusion.
4 I am asking for Facebook's understanding
5 of what personal information is. 05:10:03

6 A. And as -- as I've already identified, it
7 wasn't in the scope of what I prepared in the
8 context of this deposition for the jury.

9 MS. WEAVER: And, Rob, why is it that you
10 think the definition of personal information is not 05:10:23
11 within the scope of user data and information?

12 MR. BLUME: It's defined in the CCPA,
13 which is a statute, and that is the definition.
14 Whether he can articulate it word for word or
15 whether he refers to the CCPA's definition is what 05:10:37
16 it is under the statute.

17 MS. WEAVER: I believe this is what --
18 (Simultaneously speaking.)

19 MR. BLUME: That is the definition --

20 MS. WEAVER: Rob, if you listen to the 05:10:46
21 question -- because you're objecting off point.
22 Could you please read back --

23 MR. BLUME: Your -- your question was --

24 SPECIAL MASTER GARRIE: All right. Stop.
25 We are not going off the rails. We are way too far 05:10:52

Page 222

1 into this today. 05:10:55

2 So read the question back.

3 Counsel Blume, if you want to respond, and you feel

4 you're responding, please do so. And we'll note

5 the objection for the record and we will then move 05:11:05

6 forward.

7 MS. WEAVER: The question is at page 196,

8 line 9.

9 MR. BLUME: Can you read it again?

10 SPECIAL MASTER GARRIE: 196. 05:11:31

11 MR. BLUME: The question I have is --

12 MS. WEAVER: I'm sorry. It's line 3.

13 MR. BLUME: Yeah, I'm -- I'm -- you're

14 asking me -- I'm happy to read the question.

15 "So the answer is, here right now, you 05:11:37

16 don't know what the definition of personal

17 information is" --

18 MS. WEAVER: Rob.

19 MR. BLUME: -- "under the CCPA; is that

20 correct?" 05:11:44

21 That's the question.

22 MS. WEAVER: Rob, it's line 3.

23 I'm not asking for a legal conclusion.

24 This is the question: What is Facebook's

25 understanding of what personal information is? 05:11:51

Page 223

1 MR. BLUME: He said it was the CCPA. And 05:11:55
2 that's a statute that you're --
3 (Simultaneously speaking.)
4 MS. WEAVER: Okay. But you're not
5 testifying, Mr. Blume -- 05:11:59
6 SPECIAL MASTER GARRIE: Wait. Wait.
7 Everybody just -- for some reason you guys
8 interpret my silence as a permission to keep
9 talking.
10 The objection is pending. I hear it. 05:12:06
11 And we will go from there.
12 Counsel Weaver, what was -- so I'm
13 looking at this. You asked a question to the
14 witness. The witness -- all right. It says "I'm
15 not asking for a legal conclusion. I'm asking for 05:12:25
16 Facebook's understanding of what the personal
17 information.
18 And then there's an answer.
19 And what is your -- your -- and then --
20 so help -- walk -- work with me. 05:12:36
21 So what is the issue, Counsel Weaver?
22 MS. WEAVER: I would like an answer to
23 the question of what Facebook's understanding of
24 personal information is.
25 SPECIAL MASTER GARRIE: Okay. That is 05:12:46

1 the question that is pending to the witness. 05:12:48

2 Is there an objection, Counsel Blume?

3 MR. BLUME: The objection is to the

4 extent it calls for a legal conclusion.

5 SPECIAL MASTER GARRIE: Noted -- 05:13:00

6 MR. BLUME: That is -- that's -- that's

7 my objection.

8 SPECIAL MASTER GARRIE: Noted for the

9 record.

10 Mr. Clark, please answer the question to 05:13:06

11 the best of your ability.

12 THE DEPONENT: To -- to the best of my

13 ability, as a representative of Facebook, I -- I

14 didn't prepare for that in -- in the context of

15 answering No. 4. 05:13:18

16 In my personal experience, the definition

17 that I have, I have gotten in working under

18 guidance and direction of counsel for the sake of

19 product work. And -- and I -- I don't know what I

20 can say and what I can't say. 05:13:39

21 I'm -- if -- if I were asked and even if

22 I were read is the CCPA definition of this, this,

23 then I could give an observation or factual answer,

24 I could answer that. But understanding implies

25 much more -- 05:14:03

1 SPECIAL MASTER GARRIE: Counsel Weaver, 05:14:05
2 you can follow --
3 THE DEPONENT: -- than what I had
4 prepared.
5 SPECIAL MASTER GARRIE: Go ahead. Sorry. 05:14:08
6 I didn't mean to interrupt.
7 THE DEPONENT: Oh, than -- than what I
8 had prepared for.
9 SPECIAL MASTER GARRIE: Counsel Weaver.
10 MS. WEAVER: This is a fundamental 05:14:18
11 question to the case and relates directly to the
12 data that is deleted and collected by Facebook.
13 What is Facebook's definition of personal
14 information?
15 I'm not asking for a legal conclusion. 05:14:27
16 I'm just asking --
17 SPECIAL MASTER GARRIE: Hey.
18 MS. WEAVER: Yeah.
19 SPECIAL MASTER GARRIE: The witness
20 testified he's not prepared to answer that on 05:14:33
21 behalf of Facebook as the witness -- I mean, I can
22 read you back what he said, but -- I mean --
23 MS. WEAVER: Okay. Well, I'll move on.
24 Sanctionable.
25 Q. (By Ms. Weaver) Looking at this 05:14:49

Page 226

1 document -- looking -- 05:14:50

2 MR. BLUME: Objection to the comment.

3 Q. (By Ms. Weaver) -- going -- looking --

4 Mr. Clark, do you see a bunch of Facebook

5 identifiers listed in this document? 05:14:56

6 A. I do.

7 Q. Do you know what the [REDACTED] is?

8 A. This is Facebook [REDACTED]

9 prior to the rename of Meta, as this document

10 hadn't been updated. [REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

15 Q. What is [REDACTED] 05:15:35

16 A. It --

17 Q. I'm sorry.

18 A. I believe [REDACTED]

[REDACTED]

20 Q. And -- and back to the third-party 05:15:46

21 identifier you said we discussed earlier.

22 What are you referring to?

23 A. In one of the earlier documents we had

24 discussed -- we had referred to third-party ID, the

25 ephemeral third-party IDs. 05:16:03

Page 227

1 Q. You mean the IDs used in customer match? 05:16:09

2 A. No. These are -- these are

3 identifiers -- not just individual user

4 identifiers. These are identifiers of objects,

5 transactions, third parties. 05:16:21

6 Q. Okay. [REDACTED] what is that?

7 A. I believe that one is [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED] when I -- when I choose the button on 05:16:43

11 Instagram, it's the [REDACTED]

12 [REDACTED]

13 Q. Is --

14 A. -- as Instagram has its own canonical

15 user -- as Instagram has its own canonical user ID, 05:16:56

16 this maps between the two.

17 Q. Understood.

18 And do you see where it says "Cookie

19 Identifiers" in this document?

20 A. I do. 05:17:10

21 Q. And it lists "BrowserID" and "DATR."

22 Do you see that?

23 A. I -- I do.

24 Q. How are they different?

25 A. BrowserID -- each Web browser generates 05:17:20

Page 228

1 its own unique browser ID. 05:17:22

2 DATR is the Facebook version of that
3 unique identifier, as it's possible to spoof the
4 BrowserID.

5 And then the first-party cookie 05:17:32
6 identifiers would be some of the things which we
7 had talked about before. The values associated
8 with these cookie identifiers.

9 Q. And you said a moment ago that the
10 Facebook identifiers we just discussed have changed 05:17:51
11 since Facebook became Meta.

12 Which ones changed?

13 A. Sorry. I was -- to -- clarifying to make
14 sure my statement was heard correctly.

15 This says Facebook identifiers. But that 05:18:04
16 title of that category of Facebook identifiers, if
17 updated, would say Meta identifiers, as this
18 includes user ID, which is the Facebook ID. [REDACTED]

[REDACTED] And so it's -- it's not
20 just Facebook as an application. This is Facebook, 05:18:23
21 as a company, in that line.

22 Q. Okay. And then it's --

23 A. Because it included WhatsApp and it
24 included other products as well.

25 Q. Understood. 05:18:37

1 Turning to the top of the next page, do 05:18:37
2 you see where it says "Device identifiers and
3 Advertising Identifiers"?

4 A. I do.

5 Q. What is MS -- MISDN? 05:18:45

6 A. I think that's a typo.

7 It says MISDN, but I believe it's MSISDN,
8 which is an identifier -- it's a -- it's a hardware
9 identifier on every phone.

10 Q. Is it unique to -- to the -- every phone? 05:19:05

11 A. I believe it is. I can't say with
12 specificity. I just know that it's a -- it's a
13 general unique device identifier that comes on
14 device.

15 Q. And what's an IDFV? 05:19:19

16 A. I remember the two I's. IDFV and IDFA as
17 both being an iOS-related device identifiers.

18 I don't know IDFV off the top of my head.

19 Q. What's --

20 A. I just know it's iOS-related. 05:19:34

21 Q. What's the "Family Device IDs" referred
22 to?

23 A. That is -- that is across Meta or across
24 Facebook corporate. Similar to what [REDACTED] is for

25 [REDACTED] That is the equivalent for [REDACTED] 05:19:46

1 [REDACTED] 05:19:51

2 Q. Is the family device ID tied to a
3 individual new UID?

4 A. It is as -- as this [REDACTED]

5 [REDACTED] is that one put in 05:20:08

6 combination with other things could cause or could
7 create [REDACTED]

8 So it's identified as something that when
9 combined with something else could equal

10 re-identification, which is why it's identified as 05:20:28

11 UII.

12 Q. And then GAID, what is that?

13 A. I believe that's the Google ad ID.

14 Q. And AAID, what is that?

15 A. I think it's the Android ID, if I 05:20:43

16 remember correct.

17 Q. And then it says "or other OS or
18 Facebook-generated device IDs."

19 What other Facebook-generated device IDs

20 are you aware of? 05:20:57

21 A. Well, I didn't prepare for it
22 specifically. I didn't speak to my personal
23 capacity.

24 An example of Facebook-generated device

25 ID might be for my Oculus, or might be for -- 05:21:07

Page 231


```
1 | it's -- it's Facebook-generated because it's 05:21:09
```

2 | Facebook hardware.

3 Q. And a little lower do you see where it

4 refers to "Derived data from UGC."

5	A. Yes.	05:21:32
---	---------	----------

6 Q. And it refers to hashes, embeddings and

```
7 | features or labels.
```

8	Do you see that?
---	------------------

9	A. I do.
---	----------

10	Q. What is an embedding?	05:21:42
----	--------------------------	----------

11 A. I'm reading the context, since that's a

12 | technical term that could be used in a variety of

13	different ways.
----	-----------------

14 I actually don't know with specificity on

15	this page.	05:22:08
----	------------	----------

16 I can -- I would assume that this has to

17 do with any classification as that is -- that is

18 one of the common uses of that term.

19 But I -- I can't say with specificity

```
20 | what -- what that means in this context. I would 05:22:26
```

21 | have to follow up.

22 Q. What do you mean by "classification"?

23	A. If -- if this were used in any machine
----	---

24 learning model or how that may have been used in

25 | that case is how I've seen that term used. 05:22:42

1 But as I said, I can't say with 05:22:45
2 specificity in this case at this paragraph.

3 Q. Are all three categories of derived data
4 described there stored in data warehouse?

5 A. All three of -- and this is in the 05:23:18
6 derived data from UGC category. I want to make
7 sure I'm answering the right question.

8 Q. Yes.

9 A. Yes, I would expect that.

10 Q. Is derived data not from UGC but from 05:23:27
11 off-platform activity stored in data warehouse?

12 MR. BLUME: Objection. Form. Scope.

13 THE DEPONENT: Off-Facebook activity --
14 can -- can you -- can you ask that question one
15 more time. That was -- 05:23:46

16 Q. (By Ms. Weaver) Yes.

17 A. I got confused on the --

18 Q. Is derived data generated from
19 off-platform activity stored in data warehouse?

20 MR. BLUME: Same objection. 05:23:56

21 THE DEPONENT: Data from [REDACTED]
[REDACTED] -- lands in the [REDACTED] and then
23 is [REDACTED]

24 I would also expect that derived data
25 would live in the [REDACTED], but I cannot say 05:24:17

Page 233

1 without -- with specificity without like a more 05:24:21
2 specific example.

3 Q. (By Ms. Weaver) And when you say it is
4 "transformed," what do you mean?

5 A. When data comes in from off-Facebook 05:24:30
6 activity, it comes in as log entries as -- as
7 data -- the -- the most efficient way to collect
8 that data is in -- in a raw logging format. And
9 then to do transforms which is -- an ETL
10 transformation of that data, which is a common 05:24:51
11 industry prac- -- practice to take raw log data and
12 put it into a usable fashion.

13 For instance, part of the result of that
14 transform is that data being made available to
15 consumers in -- in off-Facebook activity, which is 05:25:10
16 a tool on the Facebook site.

17 Q. When you say "put it into usable
18 fashion," what do you mean?

19 A. The data as it comes in is in a -- in a
20 raw log format. It's meant to be efficient from a 05:25:34
21 network perspective. It's meant to essentially
22 just be raw collection and not necessarily in a way
23 that it can be used. That -- that -- that data
24 would be -- might be in the JSON string. It might
25 be in a different kind of format. 05:25:54

1 I don't specifically know what kind of 05:25:56
2 format it's in. But it would be -- it wouldn't be
3 meaningful to me, as a consumer, if I saw that
4 activity on my OFA page without putting it into a
5 format that could be queried and have a user 05:26:07
6 interface put in front of it.

7 Q. Setting aside user interaction with the
8 data, how does Facebook transform off-platform
9 activity for its own use?

10 MR. BLUME: Objection. Form. Scope. 05:26:19

11 THE DEPONENT: Well, I didn't prepare for
12 it -- specifically for -- as a representative of
13 Facebook.

14 I -- just in my own capacity, that --
15 that data is -- is [REDACTED] for either 05:26:34
16 [REDACTED] purposes that I'm
17 personally aware of.

18 Q. (By Ms. Weaver) [REDACTED]

19 [REDACTED]

20 [REDACTED]

05:26:55

21 MR. BLUME: Objection. Form. And scope.

22 THE DEPONENT: I -- won't be a broken
23 record, but just from my personal experience, it's
24 the -- [REDACTED]

25 Q. (By Ms. Weaver) [REDACTED] 05:27:09

Page 235

1 [REDACTED] 05:27:12

2 A. Correct.

3 Q. And would it still be, in some instances,
4 associated with a user ID or other identifier?

5 MR. BLUME: Objection. Form. Scope. 05:27:30

6 THE DEPONENT: Just reiterating what
7 we've walked through today with the [REDACTED]
8 process and the processes in the data warehouse
9 and -- and also just from the definition of what we
10 just walked through, any of that information that 05:27:42
11 contained any of this UII, or if there was a user
12 ID or -- or one of the other -- or if there was a
13 user ID, that [REDACTED]

14 [REDACTED] And any of the [REDACTED]

15 [REDACTED] 05:27:59

16 Q. (By Ms. Weaver) And do you see the
17 question -- or the sentence in bold that says "[REDACTED]"

18 [REDACTED]

19 [REDACTED]

20 Do you see that? 05:28:16

21 A. I'm scrolling down to that.

22 I do see that.

23 Q. And does that mean that in data
24 warehouse -- which is Hive, correct?

25 A. That is correct. 05:28:35

Page 236

1 Q. Does that sentence reflect that in data 05:28:36
2 warehouse data is not deleted but just
3 de-identified?

4 MR. BLUME: Objection. Asked and
5 answered. Form. 05:28:46

6 THE DEPONENT: Where technically
7 feasible, [REDACTED]. Where it is [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 Q. (By Ms. Weaver) And how do you define 05:29:07
11 what's technically feasible?

12 A. If -- if you think about how a database
13 works, most databases work like a spreadsheet. I
14 can go in and delete a row and that would allow me
15 to delete a record. 05:29:25

16 [REDACTED]

17 [REDACTED]

18 [REDACTED]

19 [REDACTED] But not possible to

20 just go in and -- in the spreadsheet example -- 05:29:42

21 [REDACTED] which is why the [REDACTED] process

22 was invented. So that on a [REDACTED]

23 [REDACTED] would go through and

24 [REDACTED]

25 [REDACTED] and then further 05:29:59

Page 237

1 go through and [REDACTED] 05:30:03

2 Q. How are blobs of files created, in
3 general?

4 MR. BLUME: Objection. Form. Scope.

5 THE DEPONENT: In -- in my personal 05:30:17

6 experience, using -- using the pixel example, as

7 data comes back from pixel files, the data is

8 written into a raw log format. And tables are

9 merely sets of files that are written together and

10 it's -- that's how the structure, the physical 05:30:37

11 structure of how data gets written to disks.

12 MS. WEAVER: Great. Thank you.

13 Okay. This was very helpful. We really

14 are done, except that we are not closing the

15 deposition nor the topic. 05:30:52

16 Thank you very much for your time,

17 Mr. Clark.

18 MR. BLUME: And before -- before we go

19 off the record, Mr. Garrie, if I could be heard for

20 a moment. 05:30:59

21 MS. WEAVER: Let me just -- before you --

22 if you're about to launch into something else -- we

23 would request that counsel produce any documents

24 used to refresh the witness -- refresh the

25 witness's recollection in preparation for this 05:31:11

Page 238

1 deposition. 05:31:14

2 MR. BLUME: Refresh his recollection.

3 Okay. Presumably, if he didn't know it before the

4 deposition, then it wouldn't be refreshed. But

5 okay. 05:31:24

6 And Mr. Garrie, if I could be heard for a

7 moment.

8 SPECIAL MASTER GARRIE: Yes. Do you want

9 the witness to stay?

10 MR. BLUME: It doesn't matter. 05:31:34

11 SPECIAL MASTER GARRIE: Okay.

12 MS. WEAVER: It might matter to him.

13 MR. BLUME: He can go, if he wants.

14 THE DEPONENT: I'll be back.

15 MR. BLUME: I just -- I just want to make 05:31:44

16 sure that we're not chasing --

17 THE VIDEOGRAPHER: Did you want -- did

18 you want to go off the record or keep this on?

19 MR. BLUME: On -- on the record, please.

20 THE VIDEOGRAPHER: On the record. Okay. 05:31:53

21 MR. BLUME: To make sure that we're not

22 chasing windmills here.

23 The definition of personal information,

24 under the CCPA, which is the cite in this document

25 specifically, is about 330 words with three 05:32:06

1 sections and ten subsections referencing no fewer 05:32:13
2 than three other statutes, including the California
3 constitution.

4 And so to expect any witness, even a
5 30(b)(6) witness, to recite all of that by memory 05:32:25
6 is an unreasonable request when the definition,
7 quote, personal information, close quote, as is set
8 forth in Exhibit 359 has a specific cite as to what
9 it means per the -- under the CCPA. And the CCPA,
10 as I mentioned, has a very long and complicated 05:32:47
11 definition of what that means.

12 And so claiming that he should not -- he
13 should be able to recite it by memory, I think, is
14 unreasonable. And it is also -- I will also note,
15 as he testified to all day, the term "personal 05:33:04
16 information" is not a necessary -- the definition
17 of that is not necessary to understand this
18 document. It's a comparative reference with the
19 definition cited, should that comparison need to be
20 made. But does not define the terms used by 05:33:21
21 Facebook, which is UII and/or user data.

22 Thank you.

23 We have nothing further.

24 SPECIAL MASTER GARRIE: Well, I -- yeah,
25 I -- again, I was just -- I was just processing 05:33:39

Page 240

1 what was said. 05:33:41

2 Okay. Noted for the record.

3 But the definition of how Facebook

4 defines personal information, I would go with being

5 a critical concept for the -- the case as its 05:34:00

6 entirety. And so for Facebook, it may -- I'll

7 leave it to the parties, having read the

8 stipulation to -- having reserved all the time and

9 allocated accordingly -- to have this conversation

10 among themselves, but I would -- I would encourage 05:34:21

11 the idea of producing a witness that can define how

12 Facebook defines personal -- personal --

13 MR. BLUME: If I may, Your Honor --

14 SPECIAL MASTER GARRIE: -- information.

15 MR. BLUME: Yeah. If I may -- 05:34:36

16 MS. WEAVER: You're interrupting him.

17 MR. BLUME: How -- if I may, personal

18 information is defined by Facebook as it sets forth

19 in Exhibit 359. That is the definition under the

20 CCPA. Facebook does not use the term "personal 05:34:45

21 information." That's why we -- it -- as the

22 witness said, the Facebook term for that -- for

23 something that subsumes personal information is

24 UII. That is the term that Facebook uses. And

25 it's important to note, that as the document -- 05:35:03

Page 241

1 SPECIAL MASTER GARRIE: But -- 05:35:07

2 MR. BLUME: -- says, UII does not

3 directly map to personal information, so...

4 SPECIAL MASTER GARRIE: Well, that's --

5 that's where I got confused. 05:35:11

6 So if someone who does know the CCPA and

7 the different articles and can recite it to you, I

8 have a serious concern with the very construct that

9 it subsumes the definition of personal information,

10 so I would expect that Facebook -- 05:35:21

11 MR. BLUME: Well --

12 (Simultaneously speaking.)

13 SPECIAL MASTER GARRIE: -- can product a

14 witness -- don't interrupt me again. You interrupt

15 me again and we will have a problem. 05:35:27

16 MR. BLUME: Okay.

17 SPECIAL MASTER GARRIE: Okay. Thank you.

18 MR. BLUME: Okay.

19 SPECIAL MASTER GARRIE: Thank you very

20 much. 05:35:34

21 So what I'm trying -- and what I was

22 saying is that it subsumes the definition.

23 Thereby, they must have some understanding of what

24 constitutes personal information.

25 I have reviewed countless exhibits and 05:35:44

1 materials your client has produced referencing 05:35:47
2 personal information as a term and a concept.
3 Whether or not you personally want to take a
4 position on behalf of your client that they have no
5 position as to what personal information is in the 05:35:58
6 786-plus documents that I can cite to you that use
7 the term "personal information" is a bit
8 disconcerting to me.

9 But with that even said, I still expect
10 that Facebook would feel incentivized to provide a 05:36:12
11 witness that could attest to how it defines the
12 concept of personal information, which is subsumed
13 by this broader construct. Because I can't exactly
14 understand how they are differentiating the two.
15 And I read the exhibit and I heard the testimony. 05:36:28

16 So I advise you to take this under
17 advisement accordingly before I order it. And I
18 will encourage you again that whatever witness --
19 if he's not prepared to testify as to how Facebook,
20 as a corporate representative, defines personal 05:36:45
21 information, that's noted for the record and will
22 be reflected accordingly as one of your comments.

23 We're done. We're off the record.

24 MR. BLUME: All right. I do not mean --

25 SPECIAL MASTER GARRIE: Thank you very 05:36:58

1 much. 05:36:58

2 MR. BLUME: I did not mean subsumed. I

3 meant to read the document, which is directly --

4 does not directly map to personal information.

5 That is how we define the term. 05:37:06

6 SPECIAL MASTER GARRIE: Right. I know.

7 But it -- so I've read the documents, actually, all

8 of them. And there is -- if Facebook's position is

9 they cannot define what personal information is,

10 that is fine. 05:37:21

11 (Simultaneously speaking.)

12 MR. BLUME: That's not --

13 SPECIAL MASTER GARRIE: They can go on

14 the record -- all that was asked is how Facebook

15 defined personal information and he said he is not 05:37:28

16 prepared to testify to that.

17 I said that is fine. Right. I said that

18 is fine. I understand it was a concept of that

19 document. But the question was a broader question

20 asked by the attorney and the witness stated that 05:37:40

21 they were not prepared -- maybe there was

22 confusion. Maybe there wasn't. Fine.

23 My point is, is Facebook would -- I would

24 recommend find a witness that can define how

25 Facebook, the company, defines personal 05:37:55

1 information. That's it. 05:37:58

2 There's no further conversation.

3 MR. BLUME: Under- -- understood.

4 And with all due respect, it's -- he --

5 all he said was he couldn't reflect -- he couldn't 05:38:05

6 testify to the definition under the CCPA, which is

7 how it's referenced in this document. That is his

8 testimony.

9 SPECIAL MASTER GARRIE: Well, there was

10 actually multiple -- there -- there -- well, it 05:38:17

11 doesn't matter. The testimony is captured for the

12 record and -- and I read 196, line 3, accordingly,

13 with the subsequent six lines of answers, as well

14 as the four other references.

15 But that's neither here nor there. And I 05:38:27

16 will leave it in the hands of counsel to review it.

17 All I'm saying to Facebook is, find a

18 witness that can define what personal information

19 is, if there is not an agreement on this. Because

20 I get a lot of briefs from everybody citing to this 05:38:43

21 constructs of personal information and not personal

22 information, as does Judge Chhabria. And if your

23 client doesn't have a definition, we'd all like to

24 know.

25 So with that in mind, we're going to go 05:38:55

Page 245

1 off the record. Call it a wrap for the day and we 05:38:58
2 will continue forward with other depositions.
3 That's all I'm telling for the record. Okay. All
4 done.

5 THE VIDEOGRAPHER: Okay. We're off the 05:39:11
6 record. It's 5:39 p.m.

7 (TIME NOTED: 5:39 p.m.)
8
9
10
11

12 ---o0o---
13
14
15
16
17
18
19
20
21
22
23
24
25

1 I, MICHAEL PATRICK CLARK, do hereby declare
2 under penalty of perjury that I have read the
3 foregoing transcript; that I have made any
4 corrections as appear notes; that my testimony as
5 contained herein, as corrected, is true and
6 correct.

7 Executed this ____ day of _____,
8 2022, at _____, _____.

9
10
11
12 _____
MICHAEL PATRICK CLARK
13
14
15
16
17
18
19
20
21
22
23
24
25

1 I, Rebecca L. Romano, a Registered
2 Professional Reporter, Certified Shorthand
3 Reporter, Certified Court Reporter, do hereby
4 certify:

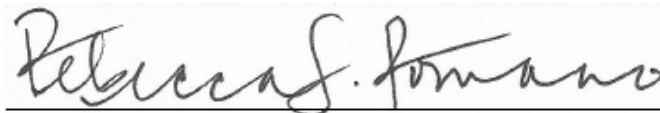
5 That the foregoing proceedings were taken
6 before me remotely at the time and place herein set
7 forth; that any deponents in the foregoing
8 proceedings, prior to testifying, were administered
9 an oath; that a record of the proceedings was made
10 by me using machine shorthand which was thereafter
11 transcribed under my direction; that the foregoing
12 transcript is true record of the testimony given.

13 Further, that if the foregoing pertains to the
14 original transcript of a deposition in a Federal
15 Case, before completion of the proceedings, review
16 of the transcript [] was [X] was not requested.

17 I further certify I am neither financially
18 interested in the action nor a relative or employee
19 of any attorney or any party to this action.

20 IN WITNESS WHEREOF, I have this date
21 subscribed my name.

22 Dated: May 23, 2022

23 
24 _____

Rebecca L. Romano, RPR, CCR

25 CSR. No 12546

Ms. Lesley E. Weaver, Esq.

lweaver@bfalaw.com

May 23, 2022

RE: IN RE: FACEBOOK, INC.

May 18, 2022, Michael Patrick Clark, Volume I (JOB NO. 5210145)

The above-referenced transcript has been completed by Veritext Legal Solutions and review of the transcript is being handled as follows:

___ Per CA State Code (CCP 2025.520 (a)-(e)) - Contact Veritext to schedule a time to review the original transcript at a Veritext office.

___ Per CA State Code (CCP 2025.520 (a)-(e)) - Locked .PDF Transcript - The witness should review the transcript and make any necessary corrections on the errata pages included below, notating the page and line number of the corrections. The witness should then sign and date the errata and penalty of perjury pages and return the completed pages to all appearing counsel within the period of time determined at the deposition or provided by the Code of Civil Procedure.

___ Waiving the CA Code of Civil Procedure per Stipulation of Counsel - Original transcript to be released for signature as determined at the deposition.

___ Signature Waived - Reading & Signature was waived at the time of the deposition.

Page 249

1 ___ Federal R&S Requested (FRCP 30(e)(1)(B)) - Locked .PDF
2 Transcript - The witness should review the transcript and
3 make any necessary corrections on the errata pages included
4 below, notating the page and line number of the corrections.
5 The witness should then sign and date the errata and penalty
6 of perjury pages and return the completed pages to all
7 appearing counsel within the period of time determined at
8 the deposition or provided by the Federal Rules.
9 _X_ Federal R&S Not Requested - Reading & Signature was not
10 requested before the completion of the deposition.

[& - 30]

&	03233365 12:7	17 26:20	2015 31:11 204:8
& 1:14 2:19 3:5	1	178 11:4	2017 30:25 31:3
5:5 6:5 13:15,22	1 1:25 33:13 43:5	18 1:4,16 2:4,18	2018 166:3
167:13 249:23	55:1 167:13	13:1 249:5	2019 31:3
250:9	181:14 250:1	1801 5:9	2020 8:16 47:5,9
0	10 108:10,18,24	184 11:11	47:15 62:25
0 117:21 214:16	109:2 113:24	1881 6:16	2022 1:16 2:18
00000001 9:6	114:24 141:12	18th 13:6	10:17 13:1,6
00000002 9:7	142:9	194 11:16	138:13 247:8
00000003 9:11	10.29.2021 8:21	195 11:20	248:22 249:3,5
00000004 9:12	10/9/2013 11:11	196 223:7,10	2025.520 249:9,12
00000008 11:6	186:8	245:12	203 12:4,9
00000009 11:7	105 10:9	1969 131:19	206 4:13
00000021 11:17	106 10:13	1970 131:19	21261 187:3
00000022 11:18	10:07 2:18 13:2,6	1:19 127:3	21262 187:6
00000023 11:22	10:34 32:24	1:25 127:6	213 7:10 12:12
00000025 11:23	10:53 33:2	1:28 171:3 173:3	23 8:16 47:5,9,15
00000026 10:10	10th 173:2	1:49 65:9	195:2 248:22
00000027 10:11	11 9:14 10:17	1:52 144:23	249:3
00000028 10:6	11-30-2011 158:3	1:53 145:1	23rd 62:25
00000029 10:7	11th 64:8	2	24784904 179:18
00000030 10:20	12 186:20,21	2 55:1 160:19	25 26:23 32:12,13
00000031 10:21	1201 4:10	181:15 206:20,24	195:2
00000043 8:17	123 141:7,17 142:2	207:2	251 1:25
00000054 8:22	12546 1:21 248:25	20 25:6 26:13,16	253-9706 7:10
00000056 8:18,23	1260 186:15,16	28:8,15 30:8,20	26 96:24 105:8
00000059 10:14	127 10:16	141:8 142:9	262 188:14
00000060 8:12	12:01 77:18	20-0466 1:22	27 96:24 105:8
00000065 8:13	12:15 77:21	200 26:20	280 91:14
00000066 12:13	12th 3:10 65:8	2007 41:16,23	2843 1:3 2:3
00000069 12:14	92:23	2010 92:23 215:21	298-5735 5:12
00347605 9:20	13 186:20,21	2011 54:7,10 55:4	2:00 187:17,17
90:24	138 10:19	55:23 56:13 67:11	2:05 157:15
00347886 9:21	14b 208:25 209:13	67:18,20 68:7	2:55 157:18
01952478 10:24	209:14	85:20	3
163:8	14f 209:20	2012 26:19 27:4,14	3 91:19 128:6
02843 1:4 2:4	15 8:5 25:3,10	29:1,3,7 44:18	223:12,22 245:12
032333365 12:10	75:20 156:6	65:8	30 1:12 24:22 26:5
032333363 12:6	1600 3:11	2013 9:14 26:20	26:6 55:4 91:5
203:14	163 10:23	31:8,11 64:8 65:6	92:22 221:10
		65:19	240:5 250:1

[3000 - 849-5348]

3000 6:9	115:4	3:19 172:24	56 43:20
302 54:21 184:25	347 10:9 104:24	3:57 194:14	57470062 97:3
194:2	105:1 106:14	3rd 65:6 180:18	57833386 139:9
303 5:12 189:18	108:5 111:11	4	58 163:1
305 189:18,19	112:10,20 118:22	4 17:21,23 38:18	59 46:12
307 190:10	196:23	39:9,11 86:5	5:39 246:6,7
30th 55:23	348 10:13 106:7,11	122:11 134:23	5th 7:7
31 140:3 184:25	117:8,13 118:17	135:15 145:2	6
185:3	136:7,21 160:7	152:13 155:23	6 1:12 221:10
3200 4:11	214:8,9	221:25 225:15	240:5
32nd 7:8	349 10:16 127:22	40 210:22	60 33:5 43:13 92:5
33 8:11 12:19	128:1 136:11	40a 210:23	623-1900 4:13
141:9 142:10	3491 1:23	415 3:13 6:11	63 9:14
330 12:19 239:25	35 23:3 26:9	4200 5:10	64 109:15,16
339 8:11 33:17	141:12 142:10	43 8:15 43:19	65 9:9 33:6 43:13
42:19 43:3,11	350 10:19 138:18	445-4003 3:13	203:14
44:1	139:3,7,8	45 26:18 32:12,12	650 6:18
340 8:15 43:15,18	351 10:23 163:3,7	72:11,13	66 213:25
45:16 46:9 47:1	163:11 164:6	456 141:10,19	68 64:6
47:15 48:9 52:3	352 11:4 178:5,9	142:5	685353953253
52:11 54:9 61:17	179:11	46 8:20	141:20 142:5
62:24 72:3,7	353 11:9	47176393 105:15	69 213:25
174:1,5	354 11:11 184:21	48265038 214:22	6a 212:7
341 8:20 46:11,13	185:9 186:1	4:14 194:17	7
342 9:4 54:17 55:7	355 11:16 194:4	4:45 213:14	7/7/2021 48:12
55:12,13,21 63:3	356 11:20 194:22	4:57 213:20	73 187:15
66:15 68:16 78:10	194:23 195:5,6	5	7321 248:24
82:2 102:7 158:5	357 12:4 203:1,8	5 187:16	7654321 192:15,16
158:6	203:10,24 204:6	5.2.2.b 9:15	192:23
343 9:9 64:23 65:2	210:2	5.2.2b. 65:22	786 243:6
65:5	358 12:9 203:4,8	5/12/2010 91:5	7:42 171:2,17
344 9:14 63:13,14	203:12,15,16	50 52:5 93:15	7f 211:15
63:17,24 64:2,7,14	359 12:12 213:16	51885342 195:9	8
64:15 65:4,14	213:23 214:17,19	5210145 1:24	8 178:12
345 9:19 90:18,22	214:20 215:12	249:5 251:2	80202-2642 5:11
90:23 91:19 92:11	240:8 241:19	52569136 117:15	81 54:24,25 158:1
96:3 102:24	36a 210:14	53 46:10	158:8 198:4
346 10:4 92:1	381 185:4	54 9:4 46:12	827 1:22
95:25 96:20 97:1	393-8247 6:11	555 3:10 6:8 7:7	849-5348 6:18
97:2 99:20 100:8	3:18 172:21		
101:17 103:13,17			

[88 - afraid]

88 194:3 886 90:24 8:00 187:17,17 8:02 65:7 8:17pm 55:5 8b 205:19,25 206:12 9 9 168:12,13,13 178:13 223:8 90 9:19 68:10 71:10,21 72:22 74:15,15 75:11 83:14 84:2,8 85:17 118:24 141:21,25 143:20 197:24,25 198:3 202:18 236:15 237:23 90013 7:9 91 91:24 92 10:4 138:17 94105-0921 6:10 94304-1211 6:17 94607 3:12 98101 4:12 985533446643 141:18 142:2 99 106:11 9th 168:13 204:8 a a.m. 2:18 13:2,6 32:24 33:2 171:2 171:17 187:17,17 aaid 231:14 abide 116:25 ability 67:12 73:5 111:17 116:12 142:16 159:25 160:2 180:25	183:5,22 184:1,12 208:6 225:11,13 able 13:19 44:9 51:9 53:14,17 83:18 89:22 90:12 90:17 93:6 95:18 113:9 117:24 138:3 181:10 192:20 193:13,22 196:18 197:10,14 198:25 202:4 208:23 209:11 210:7,10,21 240:13 absence 194:21 absolutely 112:19 154:9,15 abusive 111:25 112:8,13 access 18:17 103:13,19,21 132:16,17 133:3 accessible 197:1 accident 18:14 78:3 accomplish 21:23 21:23 accomplishing 156:4 account 36:12,17 37:5,18 41:5,7,10 62:13 67:4,4 68:2 68:18 72:19 78:25 79:1 100:1 108:8 109:4 116:4 137:24 142:12,19 143:22 171:20 175:6,22,24 176:1 176:7,8,13 177:17 196:5,6,15,17 198:9,13,13 199:5	202:3,6,8,17,18,21 216:14,15 217:18 228:8,9 accounting 24:1 accounts 39:13 57:4 67:13 68:18 69:8,17 70:1,7,14 141:13 accurate 30:22 45:9 58:2 88:25 acquired 193:22 acronym 161:2 216:11 action 62:19 67:5 76:25 143:19 248:18,19 actions 1:7 2:7 172:10 activates 177:7 active 36:12 37:5 37:19 68:1 84:15 102:25 117:6 141:3,8,12 142:8 175:24 176:8,14 177:14 198:9,11 202:3,7,8,17 activity 113:8 116:5 138:10 151:1,2 197:25 233:11,13,19,22 234:6,15 235:4,9 actual 81:14 98:7 115:15 141:6 175:16 187:5 ad 134:8 231:13 adam 55:5 add 154:1 added 60:7 115:12 addition 26:13 39:4 47:20 49:1,3 49:13 53:20 64:21	71:13 115:7 116:21 144:16 additional 34:8 64:21 131:10 additionally 216:24 address 40:25 41:11 64:9 106:3 137:22 159:4,6 169:15 170:18 addresses 106:20 118:25 administered 15:2 248:8 administering 14:6 admit 105:5 adopted 190:7 215:24 216:3 ads 169:8 181:16 182:5 216:5 advance 8:12,13 8:17,18,22,23 9:6 9:7,11,12 10:6,7 10:10,11,14,20,21 11:6,7,17,18,22,23 12:13,14 33:5 55:1 94:4 96:24 105:8 178:12 195:2 213:25 advanced 43:13 43:19 advertiser 131:4 134:4 advertising 230:3 advise 243:16 advisement 243:17 affect 76:19,23 afraid 161:18
---	---	---	---

[age - apps]

age 141:3,9,12,25 142:10	anid 189:24 190:2	128:17 129:2	apparently 164:18 167:3
aggregated 142:9	anna 205:1	130:1 144:5	appear 31:14 56:22 247:4
ago 64:4 75:20 118:24 136:9 148:2 169:2 229:9	anon 10:9 54:4,14 67:8,19,20 70:17 76:3 84:9 85:15 97:10 99:6,7 105:16 112:11,21 113:4,19 114:16 114:19,21 115:1 116:9 139:12,16 139:17,19,20,21 140:5,7,8,8,9,23 141:13,22 143:7 143:16,20 159:22 165:7 187:11,14 187:20 198:2 199:22 200:8 201:9 236:7 237:21	149:21 151:13 154:6,11 166:5 175:2 192:11 197:19 207:10 218:1,1,21 219:2,6 219:14,15,16,22 219:23 220:6,8,11 220:14,21 221:2,7 221:8,25 223:15 224:18,22 225:10 225:23,24 226:20	appearances 3:1 4:1 5:1 6:1 7:1 appearing 3:2 4:2 5:2 6:2 7:2 249:18 250:7
agree 14:5 41:20 58:4,19 69:8,17,24 155:19 169:19 173:14	agreement 29:6,8 245:19	answered 118:21 237:5	appears 44:5 45:20,24 47:3 56:4,15 65:10 97:2,2 105:15 117:14 139:8 140:25 164:7 189:22 204:6
agreements 29:11	ahead 54:20 60:12 76:17 113:17 118:7 140:14 171:12 184:24 217:13 226:5	answering 17:12 85:9 98:4 135:7 175:20 186:5 221:14,21 225:15 233:7	apple 107:21 apples 111:4,5 122:25,25
aims 52:22	aka 209:6	answers 21:19,21 67:17 245:13	application 85:7 133:7 138:15 176:15,19,20,21 176:22 177:1,7 178:1 180:19 183:6,9,23 184:1,2 184:13 196:7 211:22 229:20
allocated 241:9	allow 21:16,18 122:7 237:14	anti 17:3 18:24 73:7	applications 59:13 142:15 180:18 183:3
allows 198:10 209:8	allows 198:10 209:8	anybody 32:6 130:13	applies 57:8
alternatively 85:2	anonymize 75:8 78:14 112:14 158:14	anymore 161:23	apply 67:20
alto 6:17	anonymized 75:10 75:22 113:24 140:11 159:2 199:11,18	apart 200:18	appreciate 21:14 68:14 160:15
altogether 169:6	anonymizing 97:6	apologies 35:25 48:11 158:9 183:17 204:3 212:6	appreciated 33:10
amount 24:2 111:25	anonymous 189:25	apologize 21:5 35:6 105:5 126:1 165:20 186:23 204:16	appropriate 156:15
analyses 60:15 137:7 138:8	answer 21:17 22:2 28:4 37:13 40:13 83:18,21 84:19 86:1,3,17 88:6,24 92:8 95:6 98:20 98:21 117:24	app 11:4 115:14 115:18,21 116:3 178:13 179:4,4,17 184:4	approximately 21:4 23:3 26:17
analysis 89:22 202:3 209:5,7,11 218:20 235:24			apps 176:13,16 181:9,12,13 182:1
analytics 89:23 235:16,19			
analyze 68:22			
android 231:15			
angeles 7:9			

[apps's - ayana]

apps's 51:24 april 10:17 architected 200:4 archive 164:24 area 29:20 argue 147:2 arguments 155:17 articles 242:7 articulate 220:13 222:14 asap 180:4 asid 11:5 133:11 174:22 176:11 177:11,19,20 178:13,18,22 179:18,21,23,24 180:3 183:2,7,24 aside 33:16 193:20 235:7 asids 180:17,17,22 181:1 184:7 asked 35:7 39:2 62:2 69:19 70:8 71:25 83:8 88:14 98:20 118:22 125:10,17 151:21 153:14,15 154:4 166:20 210:10 221:10 224:13 225:21 237:4 244:14,20 asking 22:4 28:18 37:1 56:11 61:16 85:10 102:23 112:15 120:20 123:7,24 124:2,16 150:23 152:1 155:4 175:15 178:21 181:24 193:6 215:11 221:14 222:3,4	223:14,23 224:15 224:15 226:15,16 asks 134:23 aspire 48:17 assessment 19:14 19:21,23 27:3 assessor 19:8 assigned 217:2 assist 32:6 128:10 128:12 assistance 13:18 assoc 50:23 51:3 82:7 85:20 102:8 171:19 associable 237:9 associate 7:17 40:10 150:22 151:1,19 197:14 201:21 associated 17:9 20:2,9 26:22 27:3 27:19,22 28:12,23 28:25 29:1,14,21 29:21 30:12 39:6 41:10,15 42:6,7 46:1 49:2,4,13,15 49:16 50:3,11 51:10 65:24 68:6 68:9 70:6 75:22 81:13,16 83:3 84:22 87:3 116:1 116:15 137:20 148:14 151:9 153:8 154:21 168:8,9 179:3 188:24 192:1,3 193:8 200:14 202:7 203:8,11 208:2 217:22 229:7 236:4 237:9	associates 199:7,9 207:14 228:11 association 17:25 30:9 38:12,15,21 38:22 39:1,3 50:14,17,23,24,25 51:21,25 68:3 82:15,17,23 84:15 145:5 147:15 150:3,8,15 151:1,5 151:21,24 152:8 154:25 155:3,10 155:23 177:1,9,11 189:8 193:16 227:19 associations 39:18 59:11 147:7 152:6 152:17 207:18 assume 22:3 200:20,24 232:16 assuming 122:13 attach 137:14 192:20 attached 33:19 43:17 46:15 54:19 63:16 64:25 90:20 92:3 105:3 106:9 127:24 138:20 163:5 178:7 180:14 184:23 194:6,25 203:3,6 213:18 attachment 65:4 attachments 64:16 64:18 attempt 53:21 attempted 147:24 attention 52:17 155:22 158:11 attest 243:11	attorney 3:9 6:7 6:15 14:9 244:20 248:19 attorneys 4:9 5:8 audience 50:15,21 51:1,19 84:11 212:10,20 213:1 audit 27:5,15,24 30:25 31:11 66:6 66:11 204:15 audited 29:12 auditing 28:22,24 65:23 audits 26:19,25 27:1 28:9,11,19 44:18 august 12:6 204:9 204:11 205:11 auld 3:5 13:15 authentication 119:7 132:5,7 133:2,17 134:1 211:25 authorized 133:3 automated 228:9 automation 111:22 available 102:16 167:4 196:15 234:14 avenue 4:10 avoid 156:12 169:5 aware 36:4 60:9 60:20 74:2,10 76:21 77:3 119:12 121:3 124:7 190:25 193:25 231:20 235:17 ayana 204:7,8
---	--	--	---

[b - blume]

b	bad 114:2 181:1 181:14	behaviors 181:13	168:24 173:1
b 1:12 7:5 8:8 9:1 10:1 11:1 12:1 22:15 143:8 144:12,12,13,14 221:10 240:5 250:1	based 11:20 29:15 45:10,14 99:15 154:10,11 166:3 173:16,16 195:3,8	believe 26:20 42:19 45:8,14 49:8 59:6,25 67:17 81:2 82:21 83:7 123:11 127:21 150:25 151:20 163:23 185:9 189:15 218:1 222:17 227:18 228:7 230:7,11 231:13	203:17 243:7
back 31:8 33:1,23 34:1,15,23 35:2 37:21 38:10 39:6 40:7,19 42:3 51:1 52:2 53:24 58:22 61:16 62:19 63:3 63:21 66:15 68:4 71:16,17 72:2 77:20 79:19 82:3 83:23 86:6 96:3 106:6 115:4,20 116:1 119:18 121:10 127:5 133:13 136:6,20 137:1 138:3,11 144:25 156:9 157:10,17 158:1 162:25,25 171:12 172:23 173:1 177:12 193:23 194:16 196:18,20 196:22 198:8 202:9,9,13 210:2 212:1 213:19 217:18 222:22 223:2 226:22 227:20 237:9 238:7 239:14	basically 173:7 184:2	believed 150:25	bleichmar 3:5 13:15
backfill 100:14 101:8	basis 44:7 75:1 101:7 113:8 187:9 215:23 220:25 237:22	best 29:19 45:9 83:21 101:25 102:15 177:22 225:11,12	blogs 237:17 238:2
background 75:7 76:4,7	bates 33:4 43:13 43:19 46:10,12 52:5,7 55:1 64:5 90:24 105:7 140:3 163:8 178:12 185:4 186:22 187:3 189:17 195:2 203:14 213:24	better 42:4 213:7	blume 5:6 13:21 13:21 14:11 19:18 20:13 27:7 28:1 29:18 30:14,16,18 32:15,17 33:3,5 35:19 36:23 37:11 38:14 39:20 40:12 41:17 42:10 45:12 46:18,24 47:16,25 49:20 50:4,19 51:5,22 53:11 54:12 56:2,14,20 58:3,12,20 59:8,17 59:24 60:23 61:13 61:25 62:8 66:1,7 66:21 67:7,23 69:9,18 70:2,10,15 71:1,8,23 73:12 74:7,16 75:14 76:8,15 77:1,8 78:24 79:5,15 80:5,11 81:19 82:11 83:6,16 84:3 85:13,25 86:12,19 87:5,12 88:4,18 89:7,15 90:6 92:12,25 93:16 94:1,15 95:2,13 96:7 97:8 97:17 98:1,15 99:11 101:24 102:13 103:25 104:4,9 107:13,22 108:11,20 111:13
backup 78:3	bear 203:13	beyond 77:1 86:12 87:12 88:4,18 89:7 92:25 94:1 133:19 134:23,24 135:15,15 145:15 145:24 147:2,3 188:18	
	bearing 43:12,14 43:19,20 178:12	bfalaw.com 3:14 3:15 249:2	
	bears 54:25 55:2 64:5 90:23 105:7 185:3 195:1 213:24	biesnecker 164:11	
	beginning 13:12 46:11 91:11 215:16	big 237:17	
	begins 186:15 188:13	bigger 184:3	
	behalf 2:16 13:22 14:2 17:14 59:21 108:19,23 226:21 243:4	bii 143:8 144:10 164:24 165:1,5,7 165:15,16 166:12 166:16,24,24,25 167:4,25 168:19	
	behavior 60:16 111:16,21 112:8 112:14	billing 18:17	
		binder 118:13 122:3 136:9	
		binding 14:7	
		bit 48:16 79:10 109:15 122:21	

[blume - capacity]

114:5 116:7 119:5 119:14,16 120:4 120:11 122:6,7,10 122:24 123:3,18 124:21 125:2,13 125:22 126:8,16 126:20,24 127:1,9 128:14,25 129:8 129:12,17 131:25 132:19 133:19 134:13,22 135:6 135:14,25 136:18 144:21 145:2 146:3,15,18 148:19,25 149:7 149:13,16 150:6 150:11,13 151:4,7 151:13 152:7,11 152:18 153:14,19 154:3,7,8,15,23 155:1,19 156:8,19 156:21 157:3 159:13,20 160:17 162:8,18 166:14 167:6 169:20 171:9 172:4 173:15 175:12 176:6 177:24 179:6 186:17 187:12 188:18 189:1 191:4,7,13 192:6 193:10,24 197:3,16 200:1,16 201:5,12,23 205:5 206:7 207:8,16,23 208:8,15 209:18 210:17,25 211:8 211:16 212:11,23 213:12 214:11,14 217:23 218:10,24 219:12 220:9,20	221:17 222:12,19 222:23 223:3,9,11 223:13,19 224:1,5 225:2,3,6 227:2 233:12,20 235:10 235:21 236:5 237:4 238:4,18 239:2,10,13,15,19 239:21 241:13,15 241:17 242:2,11 242:16,18 243:24 244:2,12 245:3 board 189:23 bold 103:18 182:22,23 236:17 borker 22:15 25:2 bottom 93:17 103:19 148:12 161:13 167:11 171:3 box 11:12 186:12 188:22 boy 205:25 209:1 break 32:18,20 69:22 77:14 126:16 144:20 156:24 157:7 167:12 169:25 177:9 194:10 214:1 breaking 76:9 83:9 breaks 137:2 brief 77:25 briefly 26:1 115:4 briefs 245:20 bring 196:18,20 bringing 87:18 brings 214:17 broad 34:18 50:7 87:8 95:18 155:13	broader 19:23 20:8,14 196:4 216:3 218:2,3 243:13 244:19 broadly 62:5 161:8 208:9 broke 35:6 broken 235:22 brokers 191:2,10 browser 119:3 120:6,8,10,18,23 120:24,25 121:1 127:14,15 129:25 130:5 131:8 133:4 170:5 228:25 229:1 230:25 browserid 228:21 228:25 229:4 browsers 119:6 120:9 build 16:23 110:3 112:1 182:17 building 100:22 109:23 182:18 built 16:8 75:24 86:22 94:9 116:9 144:15 165:14,23 188:11 216:7 bullet 167:21 180:2 195:21,22 bullets 143:4 168:21 bunch 227:4 business 16:7 59:2 59:15,19,22 60:21 68:21,23 69:5,14 69:25 70:3,5,13 131:5 134:5 215:9 button 228:10	c c 5:6 22:16 50:23 57:8 131:15,24 132:10,25 133:1 133:25,25 134:20 134:21 186:7,8 ca 9:20,21 10:24 12:6,7,10 90:24 163:8 203:14 249:9,12,20 cache 108:16 california 1:2,21 2:2 3:12 5:9 6:10 6:17 7:9 15:19 240:2 call 50:13 104:15 104:20 169:22 246:1 called 50:18 54:4 57:15,17 59:10 64:20,22 85:20 86:24 89:13 99:5 117:15 143:8,11 143:17 167:4 187:22 195:16 209:21 calls 217:23 218:11,24 221:18 225:4 campen 4:7 canonical 34:13 34:25 35:13 116:1 116:14 133:9 174:23 177:4 184:9,14 201:16 228:14,15 capability 110:18 capacity 86:20 88:9,23 89:12,19 90:10 96:13 98:25 109:11 110:2
--	--	---	---

[capacity - column]

111:20 114:10 220:19,22,24 231:23 235:14 captured 152:12 245:11 car 18:14 care 16:20 162:2 173:8,9,11 careful 101:1 cari 4:7 13:19 case 1:4 2:4 16:7 17:18 25:17 34:10 34:19,25 75:17 101:13,13 116:10 173:10 183:5,22 226:11 232:25 233:2 241:5 248:15 cases 74:19 79:24 116:2 categories 72:16 233:3 category 217:2 229:16 233:6 caught 149:24 cause 231:6 caveat 114:12 ccp 249:9,12 ccpa 217:1 218:13 218:16,19,23 219:11,18,25 220:16 221:1,12 221:18 222:12 223:19 224:1 225:22 239:24 240:9,9 241:20 242:6 245:6 ccpa's 222:15 ccpaa 217:21 218:8	ccr 1:21,22,23 248:24 cell 205:25 206:17 206:19,20 208:25 209:13,20 210:23 center 177:5 central 16:24 74:18 79:23 centralized 16:23 certain 97:15 172:10 certainly 145:16 certified 2:20,21 248:2,3 certify 248:4,17 challenge 100:21 challenges 111:21 chance 64:13 138:22 139:5 163:17 204:1 change 251:4,7,10 251:13,16,19 changed 229:10 229:12 changes 116:12 characters 109:16 chasing 239:16,22 chat 164:7 chatting 42:19 115:23 checked 101:3 204:10 checking 166:7 178:4,8 chen 7:17 13:25 chhabria 245:22 child 73:8 choose 57:24 58:9 196:16 228:10 chose 115:22	chron 187:20,24 188:2 chronscript 187:2 187:7,11,21 chronscripts 188:6 chunks 114:24 circumvent 181:17 182:5 cite 239:24 240:8 243:6 cited 240:19 cites 164:19 citing 245:20 city 15:16 civil 249:19,20 claiming 240:12 clarified 68:14 clarify 28:14 30:19 38:16 87:7 88:24 146:3 170:16 193:5 clarifying 229:13 clarity 52:11 63:22 69:19 121:23 214:4 clark 1:13 2:15 6:14 8:3,11 13:7 13:24 14:12 15:1 15:7,13,14 18:5 31:15 33:20 34:4 42:21 43:14,23 47:1 55:7,14 64:12 77:22 78:9 91:1 123:25 125:3 129:16 145:7 157:19 194:18 203:24 213:6,21 214:18 225:10 227:4 238:17 247:1,12 249:5	251:2 classification 165:8 172:8,9 232:17,22 classifying 25:15 claufenberg 4:15 clean 83:21 199:14 209:7,7,15,17,23 cleans 238:1 clear 73:1 75:9 96:3 124:25 134:18 148:20 153:6 174:20 clearly 21:12 162:10 clementine 57:9 57:13,16,18 click 134:6 clicking 134:8 client 13:25 243:1 243:4 245:23 close 12:5 204:9 240:7 closeout 205:4,11 closing 213:4 238:14 code 159:2,3 179:3 179:3 186:10,14 186:19,19 187:5 188:13,16 249:9 249:12,19,20 collect 234:7 collected 226:12 collecting 147:22 collection 234:22 colorado 1:15 2:17 5:11 13:1 15:19 colorful 56:7 column 95:9 96:6 98:25 99:1 141:7 141:17,17 143:14
---	--	--	--

[column - context]

143:14 columns 94:13,20 95:21 96:4,5 98:12 141:2 combination 47:21 162:24 231:6 combinations 216:13 218:6 combined 231:9 come 42:3 52:1 71:17 80:21 86:6 131:22 133:13 156:13 157:10 165:25 190:6 209:10 221:3 comes 30:24 45:23 85:1 109:14 230:13 234:5,6,19 238:7 comma 155:22,23 commencing 2:17 comment 57:22 58:10 60:17,18,18 60:19 227:2 comments 49:15 137:16 243:22 commitment 137:3 commitments 217:5 common 16:24 109:13 232:18 234:10 commonly 131:16 communicate 42:4 199:15 communicating 21:12 communication 164:8	company 18:16 51:14 229:21 244:25 comparative 240:18 comparison 240:19 compiling 181:12 182:3 complaining 147:16 complete 159:24 160:15 175:13 completed 55:20 249:7,17 250:6 completely 181:17 completion 248:15 250:10 completions 188:9 complexity 159:23 complicated 65:2 240:10 complies 14:14 comply 161:25 components 54:13 210:19 comprehensive 166:21 167:13 computer 131:16 con 168:10 concept 34:23 69:13 111:7 159:11 241:5 243:2,12 244:18 concepts 111:3 143:4 concern 242:8 concerns 115:13 concise 73:1 88:25 conclusion 200:12 217:24 218:11,25	221:18 222:2,3 223:23 224:15 225:4 226:15 conduct 87:2,11 configuration 209:8 confirm 57:23 65:3 66:4 confused 66:25 124:9,18 149:3,9 233:17 242:5 confusion 244:22 congress 162:2 connect 36:21 37:2 39:19 68:24 69:6,15 70:13 228:8 connected 87:10 connection 18:10 175:8 177:8,16 198:15 connects 202:13 consent 19:8 176:15 consider 57:23 149:18,23 considered 146:20 152:19,22 155:6 181:2 217:7 considers 151:8,14 154:16 155:4 consist 149:5 consistent 78:19 78:22 79:4 80:3,6 170:14 182:12 consistently 100:25 constitute 217:8 constitutes 242:24 constitution 240:3	construct 242:8 243:13 constructs 245:21 consumer 1:4 2:4 13:9 176:14 235:3 consumers 234:15 cont'd 6:1 7:1 9:1 10:1 11:1 12:1 contact 249:9 contain 127:17 173:22 contained 92:21 98:13 120:17,20 135:4 236:11 247:5 containing 99:9 147:16 186:13 contains 91:3 93:3 127:21 134:9 141:1,4 170:7 201:8 content 48:25 49:10 58:15 59:23 61:4,11,23,24 66:20 67:15 75:25 84:24 85:6 130:6 159:1,6,11 161:1,3 161:5,8,20,22 164:23 165:8 169:16 170:20 173:23 174:10,14 186:12 196:12 204:4 217:15 contents 186:13 context 24:23 38:13,16,22 39:1 61:3,12 65:21 66:9,19 67:5 88:7 164:10 171:15,25 172:12 173:5 183:1 188:21,21
---	--	--	--

[context - cpup]

193:2 205:13 206:11 207:17 216:5 219:15,23 221:2 222:8 225:14 232:11,20 contextual 196:12 continual 237:22 continually 75:7,8 continue 68:23 69:5,14,25 114:12 246:2 continuous 76:6 contract 208:4 control 8:20 45:25 50:15,21 51:1,19 84:11 161:14 controls 20:1,8,10 26:19 27:1,3,10,12 27:13,15,17,19,21 27:24 28:11,12,22 29:14,21 30:12 31:9 44:18 47:10 47:17,21 65:24 conversation 22:22 81:3 128:15 129:4 130:20 241:9 245:2 conversations 11:5 115:16 129:1 conversion 207:22 208:5 conversions 178:14 179:18,22 converting 74:6 74:14,25 cookie 119:23,24 120:3,5,21,22 127:8,13,14,16 128:22 129:6,15 129:19,24 130:4 130:15,23 131:3,7	131:9,24 133:16 134:3,3,9,19,20,20 134:21 135:13 145:19 146:7,23 146:24 147:5,8,23 148:21 149:17,18 149:24 151:6,8 152:16,17 153:11 154:16 169:15 170:2,6,7,19 211:13,20,22 228:18 229:5,8 cookies 106:20 118:25 119:1,3,6,9 119:11,12,21 120:16,17 121:4 121:11,20 122:1,9 122:11,13,22 123:3,7,8,11,25 124:1,2,5,6,12,15 124:21,22,23,24 125:1,3,9,18,24 128:13 129:10 131:6 132:5,11,15 133:1,1,4,25 134:21 135:4,24 136:14,17 145:6,8 145:10,13,18,18 145:23 146:5,6,9 146:11,12,19 147:1,2,17,20 148:5,14 149:3,5,9 150:22,24 151:3 151:12,15,22 152:19 153:8 169:24 170:4,5 211:25 copied 32:20 211:24 copy 43:11	corner 52:9 corporate 1:13 17:14 30:11 38:19 73:14 220:18 227:8 230:24 243:20 correct 17:21,22 23:14 28:13 45:6 45:7 52:15,16 62:22 66:3 70:11 72:13 78:5 79:14 82:10 97:7,25 99:10 102:11 109:19 117:5,6 118:1 123:4,8,14 124:3 133:11,12 136:15 147:21 154:8,9,16 157:24 160:10 161:1,3 188:15 194:19 214:10 215:7 220:17 223:20 231:16 236:2,24 236:25 247:6 corrected 247:5 corrections 247:4 249:14,15 250:3,4 correctly 63:4 229:14 correlate 184:2 cough 73:25 counsel 3:1 4:1 5:1 6:1 7:1,17 13:12 13:19 14:5 22:9 22:21 23:3 26:12 28:4 32:1 44:17 46:17 81:3 118:15 122:24 123:2,3 124:2,18,21 126:1 128:10,12,15 129:1,4,13 148:4	153:10 154:3,5,7 154:11 156:21,22 160:12 164:2 178:10 214:10 219:4,4,21 220:1 220:24 221:5 222:1 223:3 224:12,21 225:2 225:18 226:1,9 238:23 245:16 249:18,21 250:7 counsels 214:2 count 141:3,8,12 142:8 countless 242:25 counts 167:22 168:22 couple 39:22 42:16,18 63:11 118:17 140:20 164:19 181:14 course 126:15 215:9 court 1:1 2:1,21 14:3,4,12,15 21:13 33:18 43:16 46:14 54:18 63:15 64:24 73:18 90:19 92:2 105:2 106:8 127:23 138:19 153:20 157:13 163:4 172:16,18 178:6 183:10,12 183:15,19 184:22 194:5,24 203:2,5 204:19 213:17 248:3 courtesy 33:9 cover 31:20 cpup 9:16,17 11:13,14 64:5
---	---	---	---

[cpup - days]

185:4 create 31:23 32:14 34:8 54:6 71:15 100:16 133:14 140:10 231:7 created 101:19 104:18 131:9 167:4 180:22 184:7 197:22 238:2 creates 97:10 creating 21:24 34:14 211:2 creation 75:11 100:12 101:10 128:8,10 205:20 206:13 critical 241:5 cross 181:12 crutcher 5:5 6:5 13:22 csr 1:21,21,22 248:25 current 15:23 23:18,23 24:11,19 25:1 75:9 83:3,14 84:1,6,8,15 102:4 currently 15:16 16:19 23:12 47:22 98:11 117:18 custom 205:20 206:13,14 212:20 213:1 customer 212:10 228:1 cut 202:14 cvikram 186:12 cycle 20:15,18,20 76:6	d d 8:1 120:1,1 176:13 195:8 daily 100:15 101:7 daniel 7:5 data 8:15 9:4 17:1 18:1 20:4,15,17,18 20:19,20,22 25:15 25:23,24 36:13,14 36:15,16,22 37:2,5 37:6,9,10,10,14,15 37:19 38:4,8,9,21 39:5,16,19 40:4,5 40:6,9,10,17,19,20 41:13,14,16 42:6,9 42:12 43:20 44:4 45:23 47:4,14 48:5,10,13,18,23 48:24 49:13 50:3 51:10 52:12,18,20 53:7,14 54:6,8 55:3,3,23 56:1,8 56:17 57:2,3,4,10 59:2,14,23 60:5 61:16 62:3,5,15,16 62:21 63:9 64:21 65:25 67:10 68:1 68:2,3,9 71:19,21 72:22 73:4,5,18 75:10,16,22 76:3,5 79:12 83:3,5,13,25 84:5,7,16,18,25 85:3,12 87:10,24 87:25 89:20,20,21 89:23,25,25 90:1,4 90:4,5,12,15,15 96:6 98:7 109:2 112:14 114:13 136:25 137:1,6 139:22 141:1,5,8 141:21,22,24	142:17,21 143:8 143:10,20 145:6 147:18,19 150:4 150:11,12,15 154:22,25 158:4 159:1,12 161:15 171:5,18 172:10 173:5,6,8,8,21,24 174:2,2,4,8 175:11 175:17,18,22 176:4,8,12 181:9 181:12 182:2,3 188:24 189:8 190:17,25 191:1,9 191:10,11,11,14 191:25 192:3 193:7,11,14,17,23 195:20 196:2,19 196:25 197:8,13 199:6,8,10,12,18 199:21 200:14,19 200:21,24,25 201:21,21 207:14 208:1 209:3,4,9,10 209:16 216:8,12 216:13,15,22 217:4,7,16 218:5,6 221:3,13 222:11 226:12 231:4 232:4 233:3,4,6,10 233:11,18,19,21 233:22,24,25 234:5,7,8,10,11,14 234:19,23 235:8 235:15,24 236:1,8 236:19,19,23 237:1,2,7,16,16,17 238:7,7,11 240:21 database 59:6 237:12	databases 237:13 dataset 87:3 201:18 datasets 52:21 date 21:7 55:25 63:1 82:12 93:20 178:3 248:20 249:16 250:5 251:24 dated 8:16 9:14 10:16 11:11 55:23 186:8 204:7 248:22 dates 204:12 dating 115:8,11,12 115:14,21 116:3,5 116:10 datr 119:23,24,25 120:3,5,17,21,22 127:8,13,16 128:22 129:6,10 129:10,15,19,24 130:4,14 135:12 147:17,23 148:21 153:8,11 154:16 170:7,9 228:21 229:2 230:24 david 4:6 day 71:10,21 101:20 109:2 114:24 141:3,8,12 142:8 148:10 153:2 187:18 197:22 204:13 219:20,20 220:3 221:3 237:23 240:15 246:1 247:7 days 68:10 72:22 74:15,15 75:11 83:14 84:2,8
--	--	--	---

[days - deponent]

85:17 91:5 92:22 100:4 108:10,18 108:24 113:24 118:24 141:21,25 143:20 197:24,25 198:3,4 202:18 236:15 de 17:25 37:23,25 41:4 42:12 52:18 52:20 53:7 54:5 62:3,20 63:8 70:17,20 110:14 110:16,20 143:9 145:4 147:6 150:8 155:2,9 177:7 193:3 198:11 208:20 217:4 236:19 237:3,8 deal 21:1 149:20 deals 145:17 146:5 147:1 debugging 41:2 december 19:10 21:8 decide 66:14 declare 247:1 decree 19:8 deeper 215:10 default 184:15,20 defenses 182:17 define 219:10 221:16 237:10 240:20 241:11 244:5,9,24 245:18 defined 59:19 60:21 91:4 109:15 218:23 222:12 241:18 244:15 defines 219:18 241:4,12 243:11 243:20 244:25	definition 12:12 16:8 38:2,7 117:8 117:17,21,25 160:9 164:15 166:21,23 167:14 167:21 169:9 174:7 175:18 186:19 214:16,21 215:13,15,15,17 216:2,7,10 217:20 218:5,15 219:5 220:16,25 221:4 221:12 222:10,13 222:15,19 223:16 225:16,22 226:13 236:9 239:23 240:6,11,16,19 241:3,19 242:9,22 245:6,23 definitions 42:2 167:17 173:19 deidentified 137:6 del 193:1 delete 25:24 48:17 53:14 58:16 59:22 60:17 61:6,11,23 62:3,4,12,16 66:20 67:4,12 72:22 73:5 75:25 116:4 142:18 187:15 196:11,11,16 217:4 237:14,15 237:21 deleted 39:13,16 40:5 41:5,10 42:9 55:3,23 56:1,8,17 57:2,3,4 60:5 62:13 63:9 64:21 67:22 68:17,18 69:7,16 70:1,6,14 70:18,19,19 79:1	100:1,17 108:7 109:4 137:2 138:5 142:21 143:23 159:24 171:20,21 175:22,23 176:1,9 198:13,14 199:5 221:13 226:12 237:2,7 deleters 11:21 195:3,8,16,17,18 196:10 deletes 36:17 58:14 59:23 61:7 137:24 139:25 142:12 143:22 175:6 177:17 deleting 55:3,23 56:1,8,17 63:9 64:20 68:19 159:22 deletingdeleteddd... 9:4 deletion 8:15 9:9 11:16 17:1 18:1 20:18,19 23:6,7,9 24:12,24 25:8,20 25:21,22 26:18,21 27:19,22,25 28:12 28:23 29:14,22 30:12 31:2,4,10,10 31:12 39:8,10,14 40:3,8,16 43:21 44:17 45:23 46:1 47:4,14,18 48:13 48:19 52:12 54:9 61:16 62:13 64:22 65:5,7,25 67:3,14 68:3 72:23 74:17 74:18,22 76:19 77:10,11 79:22,23 80:1,20 81:9,13,15	100:2 108:8,13 143:21 145:3,5,10 145:12,17 146:5 146:23,25 147:7 149:20,25 150:3,9 152:21 155:5,9 170:3 171:5 173:4 174:2 178:2 191:12,15 195:13 195:14,15 196:3,4 196:5,17 202:19 202:21 207:18 208:21 236:18 deletiondeleteddd... 158:4 demonstrate 144:1 denver 1:15 2:17 5:11 13:1 15:19 dep 155:18 dependence 181:16 182:4 dependent 67:13 depends 62:9 140:9 186:18 deponent 2:17 8:2 14:7,14,20 19:20 20:14 27:8 28:5 29:19 30:4,15,17 30:19 35:20 36:24 37:12 38:15 39:21 40:13 41:19 42:11 45:13 47:17 48:1 49:21 50:6,20 51:6,23 53:12 54:13 56:3,15,21 58:4,21 59:9,18,25 60:24 61:14 62:1 62:9 63:17,19,22 63:25 66:2,8,22 67:8,24 69:10,19
--	---	---	---

[deponent - direct]

70:3,11,16 71:2,9 71:24 73:13 74:8 74:17 75:15 76:18 77:3,9 78:25 79:6 79:16 80:6,12 81:20 82:12 83:7 83:17 84:5 85:14 86:1,14,20 87:6,13 88:6,20 89:9,16 90:7 92:4,15 93:2 93:17 94:5,19 95:5,14 96:10,25 97:9,21 98:3,16 99:12 101:25 102:14 104:1,12 107:14,23 108:12 108:21 111:14 113:14,18 114:6 116:8 119:6,17 120:5,12 124:4,10 124:13 127:10 129:3,18 132:1,20 133:21 134:14,25 135:17 136:1,19 138:25 158:8 159:14,21 162:9 162:19 164:3 166:15 167:7 169:21 172:6 173:16 175:13 176:7 177:25 178:15 179:7 183:11,14,17,21 186:18 187:13 188:20 189:2 191:8,14 192:7 193:11,25 194:9 195:4 197:4,17 200:2,17 201:6,13 201:24 204:16,20 205:10 206:8	207:9,17,24 208:9 208:16 210:18 211:9,17 212:12 212:24 213:8 214:4,9 217:25 218:12 219:1,13 220:10,23 221:19 225:12 226:3,7 233:13,21 235:11 235:22 236:6 237:6 238:5 239:14 deponent's 1:15 deponents 248:7 deposed 18:4,7,21 18:23 deposition 1:12 2:15 8:11 13:7,17 14:6,17 15:8 17:17 19:1,2,3,9 19:13,17 21:2,6 22:7 25:19 26:9 29:16 33:15 43:14 64:4 92:14 94:4 148:3,9 172:14 179:14 221:10 222:8 238:15 239:1,4 248:14 249:19,22,24 250:8,10 depositions 18:9 18:13,25 21:11 155:17 246:2 derek 4:8 derived 232:4 233:3,6,10,18,24 describe 70:22 112:12 140:22 142:24 described 54:9 110:21 121:11,20	148:15 191:21 210:19 233:4 describes 112:10 112:20 145:24 206:13 210:23 describing 26:20 49:11 63:4 93:5 112:25 139:15,17 description 8:10 9:3 10:3 11:3 12:3 98:11 112:12 137:15 139:14 147:18 206:16,18 descriptions 98:8 121:24 descriptor 41:15 descriptors 109:13 despite 153:6 detail 131:2 details 26:21 41:8 48:2,7 56:7 80:17 93:6 131:10 146:4 detect 144:11 detection 143:7 detects 143:8 determine 51:9 determined 249:18,22 250:7 developed 221:4 developer 56:16 131:11 144:7 176:14,16,20 177:8 184:18 developers 16:7 16:24 35:12 48:3 142:15 176:25 177:6 181:11,16 182:2,5 184:11 201:15 development 144:3	device 40:25 41:11 99:20 100:2,2 106:3,15,24 107:5 107:9,10,21 108:8 108:9,16 109:6 111:10,22,24 112:4,6,13,23,25 113:4,10,22 114:1 114:4,16,23 120:10,19 216:15 216:16 217:18 230:2,13,14,17,21 230:25 231:2,18 231:19,24 dgarrie 7:11 diagram 140:4,17 142:23,24 143:3 143:25 differ 47:24 different 42:8 45:21 59:7 65:9 65:10 83:8 85:9 111:2,6 112:15 119:21 120:14,16 145:24 155:20 169:7 192:12 228:24 232:13 234:25 242:7 differentiating 243:14 difficult 155:17 200:13 201:20,24 203:17 dim 93:12 95:19 95:20 100:16 101:18 102:9,12 102:17,25,25 198:15 direct 31:12 52:17 158:10 209:20
---	--	--	---

[direction - email]

direction 179:24 185:15 219:21 221:5 225:18 248:11 directions 179:21 directive 143:16 143:19 directly 30:1,24 38:8 85:6 116:3 168:12 191:17 216:25 226:11 242:3 244:3,4 director 15:24 disappear 142:14 disassociate 70:17 disassociated 53:15 62:17 68:5 disconcerting 243:8 discover 183:6,23 discuss 19:16 23:4 112:22 135:12,23 136:16 145:7,12 172:13 178:11 188:24 discussed 23:5 25:18 92:18 158:13 175:17,19 227:21,24 229:10 discussing 24:17 66:16 74:6 78:11 103:22 123:12,13 158:11 discussion 126:11 172:16 discussions 129:13 disks 238:11 disputes 18:17 disregard 43:5 distinct 69:20 91:6	distinction 170:1 216:1 district 1:1,2 2:1,2 dko 4:14 dloeser 4:16 document 1:6 2:6 31:15 33:5 43:12 43:19 45:19 46:11 47:2,13 56:25 59:16,19 60:13,22 60:25 61:19 62:2 63:2,4,6,23 66:15 73:1 82:13 91:3 91:12,13,15 92:6 92:21 94:3,17 96:4,9 97:18 98:8 99:22 100:7 102:5 105:6,20,24 106:15 113:1 117:19,22 118:4 118:15 122:2,4,8 125:11,16 128:1,3 128:7,9,11 140:3 160:8,13 161:11 162:10 163:21,23 164:1,15 166:3,6 166:16,19 167:3,8 168:18 171:24 173:18 174:4,5 178:9,15,19,21 179:13 186:16 190:3 193:19,21 195:10 205:6 214:2,24 215:1,3,5 216:20 218:9,16 218:17 221:11 227:1,5,9 228:19 239:24 240:18 241:25 244:3,19 245:7	documentation 56:16 71:4 82:13 131:10 182:14 documents 26:18 26:23 28:9,16,21 30:2,9,21 32:12,12 32:13 44:8,14,16 44:24 45:10,21 46:3,4,8,23 63:12 64:2 65:15,18 118:12 119:19 203:13 227:23 238:23 243:6 244:7 doe 141:10 142:4 doing 113:6 115:18 153:23 domain 131:4 134:4 dot 168:12 double 70:4 101:3 166:7 178:4 downstream 156:12 drafted 44:12 drafting 44:15 dub 104:15,15,15 due 245:4 duly 33:10 157:1 160:17 dumb 209:7 dunn 5:5 6:5 10:16 13:22 dyi 147:16 153:7 e e 3:6 8:1,8 9:1 10:1 11:1 12:1 22:15 22:16,17 54:4 64:10 131:15 195:7,8,8,8 249:1 249:9,12 250:1	251:3,3,3 earlier 70:23 71:3 79:10 84:10 105:6 117:9 118:18 128:2 137:12 160:6 162:10 165:6 166:8 214:3 214:7 227:14,21 227:23 editorial 162:11 edward 212:18 effect 47:6,9 54:10 62:24 63:5 97:15 effective 47:5 effectively 68:19 efficiency 202:6 efficient 110:6 201:25 202:1 234:7,20 237:18 efforts 17:3 18:24 either 21:8 36:9 52:21 71:3 88:25 93:3 99:6 103:21 104:15 110:17 153:17 161:24 208:19 235:15 elements 40:18 208:17,17 elicit 125:1 eliminate 198:23 eliminated 40:11 202:15 email 9:14 11:11 12:4 64:9,15,19 65:7,22 66:9,10 122:12 123:20 125:23 126:4 141:2,11 142:6 148:2 159:4 164:1 169:15 170:18 186:6 188:21
--	--	--	---

[email - exhibit]

203:11 204:6 208:2 emailed 123:13 124:21 125:2 146:9 189:9 emails 106:19 118:25 122:20,20 122:22,24 159:5 186:11 embedding 232:10 embeddings 232:6 emma 13:20 employed 15:17 employee 15:18 23:12 116:24 248:18 employment 15:11 15:14 16:18 18:10 18:22 en 147:1 enable 16:23 137:1 encourage 241:10 243:18 encrypted 134:10 encrypts 134:11 endeavor 21:17 ended 73:22 124:4 eneman 64:8,16 enforce 106:2 enforcement 18:24 73:9 eng 10:23 163:9 engaged 79:13 engineer 23:23 24:21,25 25:12 56:6 58:6 79:7 90:15 100:24 162:11,15 engineer's 63:7,8	engineered 200:10 engineering 24:15 82:13 143:3 195:7 217:3 engineers 89:20 89:25 90:5 100:25 116:24 ent 11:20 195:3,7 enter 123:20 entire 16:11 68:17 74:8 113:10 114:22 entirely 69:7,16 81:25 111:6 168:21 217:6 entirety 241:6 entitled 30:7 entries 234:6 entry 37:17,20 40:22 49:16,21 50:25 ephemeral 227:25 epoch 131:8,12 equal 231:9 equivalent 230:25 erase 136:25 errata 249:14,16 250:3,5 error 43:6 45:20 especially 21:11 169:8 210:1 esq 249:1 essential 176:22 essentially 142:3 234:21 esslemont 212:18 establish 206:15 estimate 24:5 ethan 164:10,12 164:17 167:16	ethical 58:15 61:5 ethics 57:20 etl 234:9 eugene 22:14 24:22,24 evaluate 80:13 112:1 evan 64:8,16 everybody 156:25 157:7 224:7 245:20 exact 21:7 23:20 24:1 82:23 149:12 191:22 exactly 23:1 41:20 59:18 66:10 130:5 166:2,21 167:14 167:15 168:16 210:20 243:13 examination 8:2 15:5 examined 15:2 217:9 example 34:20 36:8,20 40:21,23 41:15,22 49:7,8,18 49:22,23,24 50:10 60:1,2,10,14,15 67:6 83:2 84:11 89:12 107:8 112:5 112:5,6 118:18 137:11 138:11 140:23,25 142:6 147:15 166:16,18 181:8 182:13 191:21 192:9 193:12 208:3,24 217:11,15 231:24 234:2 237:20 238:6	examples 44:21 49:5 73:5 106:1 106:19,21 118:23 140:20 141:5 159:23 166:19,23 167:18,22 168:1 168:22 186:11 195:18 excel 12:9 205:16 excellent 172:1 exception 72:21 exceptions 48:5 72:1,5,12,14,15 74:23 80:2 excessive 111:25 exchanged 122:20 excluded 153:18 executed 247:7 exhausting 24:5 exhibit 8:11,15,20 9:4,9,14,19 10:4,9 10:13,16,19,23 11:4,9,11,16,20 12:4,9,12,19 33:13 33:17 42:16,19,22 43:1,5,11,15,18 45:16 46:9,11,13 47:1,15 48:9 52:3 54:9,17 55:7,12,13 55:21 61:17 62:24 63:3,13,14,24 64:2 64:7,14,15,20,23 65:2,14 66:15 68:16 72:7 78:10 82:2 86:6 90:18 90:22,23 91:19 92:1,11 95:25 96:3,20 97:1 99:20 100:8 101:17 102:7,24 103:13,17 104:24
---	---	--	---

[exhibit - facebook]

105:1 106:7,11,14 108:5 111:11 112:10,20 115:4 117:8,13 118:17 123:1 127:22 128:1 136:7,11 138:16,18 139:3,7 139:8 158:1 160:7 163:3,7,11 164:6 174:1,5 178:5,9 179:11 184:21,25 185:8 186:1 194:2 194:4,22,23 195:5 203:1,4,10,10,12 203:15,16,24 206:12 213:16,23 214:3,7,7,8,17,19 214:20 215:12 240:8 241:19 243:15 exhibits 42:17,18 42:22 43:10 203:8 242:25 exist 41:25 68:8 170:5 201:11 202:10 existed 60:19 161:15 existing 191:24 210:20 exists 37:5 39:17 40:4,9 41:13 42:7 85:18 116:17 120:25 138:5 201:6,13 expect 41:24 93:4 95:9 99:5 174:9 233:9,24 240:4 242:10 243:9 experian 212:9	experience 16:6 24:13 51:15 73:16 87:15 94:8 95:8 95:17 98:6,19 107:8,17,19 108:1 108:24 127:13,20 129:20,22 130:3 130:10,18 131:1 132:4,14,22 133:24 134:16 135:20 136:4 144:6 162:22 170:10 190:18,24 192:8 208:10 211:19 219:3,19 220:12 221:6 225:16 235:23 238:6 experts 81:11,14 expiring 142:21 explain 80:8 143:3 192:10,12 explains 57:1 explanation 182:8 explicitly 183:4 211:21 212:2 exploitation 73:9 181:8 exploited 181:9,11 182:9,16 express 55:24 expressed 35:15 35:17 147:19 expression 58:5 expressly 189:9 extend 123:3 extent 28:3 92:13 108:2 128:14,25 129:12 134:22 135:14 145:18 146:6,15,19 152:7	225:4 external 47:19,23 52:21 131:11 externally 48:7 51:4 176:23 extremely 95:18 eyes 162:1 f fabulous 72:10 face 167:14 facebook 1:3 2:3 5:4 6:4 9:5 13:8 13:22 14:11 15:15 15:21 16:7,8,10,12 16:18,23 17:14 18:10,20,22 23:10 23:13 25:21 29:6 31:2,4,13 34:12,12 35:1,2,4,5,9,9,11 35:12,20 36:5 39:11,16 40:3,5 41:16 43:12 45:24 47:4 48:2 51:20 55:3 56:12,16 57:22 58:8,9 59:21,22 61:22 63:8 64:3,9 65:24 66:5 67:4 69:13 69:24 70:12 71:7 73:2 74:4,12 75:10 83:3,14 84:1,24 86:16 87:15 88:8,22 89:11,18 90:9 92:24 94:7 95:1,7 95:16 96:12 98:5 98:18,24 99:14 100:22,25 103:7 103:10 107:8,16 107:25 108:19,23 109:10 110:1	111:10,19 114:9 115:13 116:6,8,23 119:9,11,12 121:3 121:11,20,22 127:13,20 129:20 130:2,9,14,18,25 131:5,11 132:3,6 132:10,13,18 133:9,14 134:5,7,9 135:1,10,18,23 136:2 137:2 139:10 142:15 144:6 145:7,9 147:22 148:21 149:18,19,23 150:23 151:2,4,7,7 151:14,19,19,21 151:24 152:5,19 161:16,21 162:1 162:17 166:22 167:15 174:21 176:25 178:18,22 178:24 180:11 181:16 182:4 184:10 186:7 190:1,16 191:1,10 192:4 193:8,22,23 195:7 196:7,8 201:15,19 205:21 206:14,15,15,21 206:25 207:1,6,6 207:14,15,18,21 208:4,5 209:6,8,16 210:16 212:8 214:21 215:17 220:11 221:16 225:13 226:12,21 227:4,8 228:8 229:2,10,11,15,16 229:18,20,20 230:24 231:18,19
---	--	--	--

[facebook - following]

231:24 232:1,2 233:13,21 234:5 234:15,16 235:8 235:13 240:21 241:3,6,12,18,20 241:22,24 242:10 243:10,19 244:14 244:23,25 245:17 249:4 251:1 facebook's 1:12 17:24 25:16 28:22 30:11 33:7 38:20 39:4 52:24,25 53:1,3,10,12,23 55:24 56:12 61:10 61:21 66:17,18 67:2 117:17,24 139:11 154:24 189:8 215:12 216:2,18 222:4 223:24 224:16,23 226:13 244:8 facebook.com 64:16 164:23 facebook.com. 132:15 133:5 facilitate 33:14 facing 47:20,23,23 fact 46:7 153:6 200:7 facts 149:13 factual 225:23 factually 147:21 fail 101:1 failed 101:11 failure 101:13 161:25 fair 21:19,20,25 22:1,4,5 40:11 103:4 157:6 186:14 200:15	206:16,18 207:15 fall 72:15 175:18 192:25 familiar 57:15,17 119:22,24 172:12 190:2,15,21,24 207:20 208:11,18 209:15,23 210:5 210:15,20 211:10 211:13,20 212:5,8 212:12 218:18 family 203:11 230:21 231:2 far 21:10,11 146:23 222:25 fashion 234:12,18 fast 204:17 fault 85:10 100:6 fb 9:20,21 10:24 12:6,7,10 90:24 131:3 163:8 203:14 fb00007766 9:16 64:5 fb00007768 9:17 fb00020372 11:13 185:4 fb00020380 11:14 fbc 133:16 134:3,9 134:20 fbid 35:15,15,17 36:1,2 100:16 101:18 102:4,9 135:5 174:25 175:21 177:4,10 177:12 184:9 fbtype 135:5 171:5 171:8,19 172:3,7 173:4 feasible 40:17,18 53:15 62:4,12,16	70:20 75:25 96:15 96:16 198:18 201:25 237:7,8,11 feasibly 62:4 features 232:7 feb 9:14 february 64:8 65:19 federal 248:14 250:1,8,9 feel 213:7 223:3 243:10 feels 69:20 197:17 felt 39:21 fewer 240:1 field 50:11 99:4 161:7 fielding 206:14 fields 96:5 99:9 142:8 figure 37:13 125:6 156:14 file 43:7 51:3,10 62:11 102:15 141:24 153:8 185:2 203:12,15 files 94:10,10 147:16 198:23 237:17 238:2,7,9 filing 121:10 131:2 filings 121:19 finally 72:19 142:12 143:21 financially 248:17 find 126:13,15 148:3 154:12 160:14 178:25 179:1 197:10 244:24 245:17 finds 31:3	fine 46:24 61:4 78:4 92:7 100:9 118:10 128:19 131:23 157:2 171:14 220:7 244:10,17,18,22 finish 21:16,18 75:5 firm 13:18 first 40:24 42:5 43:25 47:1 48:9 52:19 58:4 64:7 72:16 78:16 83:24 91:18,20,21 93:11 93:18,20 107:1 115:6 117:12 136:23 141:4 164:17 165:25 177:23 178:18,22 178:23 179:22 184:5,8 185:25 191:1 197:20,24 229:5 fits 154:17 155:7 five 143:19 fixed 180:4,14 flip 185:24 floor 7:8 focus 27:5 28:10 focused 16:17 27:21,24 29:17 focusing 106:13 164:14 folder 186:12,13 follow 62:17 104:13 115:5 226:2 232:21 following 141:2 149:17,18 166:22 167:17
---	---	---	---

[follows - general]

follows 15:3 249:8 fonti 3:5 13:15 foo 141:1,22 foregoing 247:3 248:5,7,11,13 foreseeable 156:18 forget 126:25 form 30:14,18 35:19 36:23 37:11 38:14 39:20 40:12 41:17,18,19 42:10 45:12 47:16,25 49:20 50:5 51:5 51:22 53:11 54:12 56:2,14,20 58:3,12 58:20 59:8,17,24 60:23 61:7,13,25 62:8 66:1,7,21 67:7,23 69:9,18 70:2,15 71:1,8,23 73:12 74:7 75:14 76:15 77:2,8 78:24 79:5,15 80:11 81:19 82:11 83:6,16 84:4 85:13,25 86:12 87:5 88:4,18 89:7 90:6 92:25 94:1 94:15 95:2,13 96:7 97:8,17 98:15 99:11 101:24 102:13 103:25 104:11 107:13,22 108:11 108:20 110:23 111:13 114:5 116:7 119:5,14,16 120:4,11 122:6 127:9 129:17 131:25 132:19 133:19 134:13	135:25 136:18 159:13,20 162:8 162:18 166:14 167:6 169:20 171:9 172:4 173:15 175:12 176:6 177:24 179:6 186:17 187:12 188:18 189:1 191:4,7,13 192:6 193:2,10,17 193:24 197:3,16 200:1,16 201:5,12 201:23 205:5 206:7 207:8,16,23 208:8,15 209:18 211:16 217:24 218:10,25 221:17 233:12 235:10,21 236:5 237:5 238:4 formal 56:23 58:7 58:23 60:20 format 234:8,20 234:25 235:2,5 238:8 formerly 24:25 formula 109:14 forth 60:21 111:10 152:13 156:16 215:6,12 240:8 241:18 248:7 forward 54:10 62:25 74:23 223:6 246:2 found 31:1,1,9 47:19 four 18:19,25 21:4 26:7 245:14 fourth 19:1,2 fpb 130:23 134:19	fr 134:21 frame 27:2,6 framework 9:10 23:6,8 25:20,22 64:22 65:6,8 67:8 67:20 74:18 77:11 79:23 81:13,16 145:10,13,17,17 146:5,23,25 149:20,25 152:22 155:5 195:13,14 196:4 frameworks 145:24 146:13 francisco 6:10 frcp 250:1 freezing 203:22 frequent 113:8 friend 60:4,7 friends 51:18 friendship 60:5 front 44:6 45:3 110:15 166:6 193:19,21 220:6 235:6 ftc 19:4 27:4 29:1 29:3,6,7 full 15:11 fully 91:15 156:21 function 75:18,21 104:15,16 111:7 133:18 138:14 144:10 189:12 functionality 23:6 23:10 24:12,18,24 51:24 84:23 104:20 115:20 functions 119:8 130:15 208:7 fundamental 156:23 226:10	further 31:8 66:9 93:6 133:6 171:23 213:3 237:25 240:23 245:2 248:13,17 future 109:3 110:18 113:5 115:23 138:9
			g
			g 22:12 64:10 gaid 231:12 game 57:9 garrie 7:5 14:1,2 122:16,19 123:6 123:10,16,19 124:8,11,14,17,20 125:5,8,19,23 126:5,6,9,14,19,22 126:25 145:21 146:8,17 147:12 148:1,6,18,24 149:2,8,14 150:17 150:20 151:5,11 151:17 152:10,15 152:24 153:3,22 154:10 155:13,24 156:2,6,9,20 157:5 222:24 223:10 224:6,25 225:5,8 226:1,5,9,17,19 238:19 239:6,8,11 240:24 241:14 242:1,4,13,17,19 243:25 244:6,13 245:9 gate 75:3 general 7:17 18:12 19:13 21:15 25:16 41:15,16 75:11 87:7 92:10 93:9 94:11 114:3,7

[general - hasnain]

162:21 164:14 166:23 167:17,21 195:11 230:13 238:3 generally 19:19 20:13 24:8 96:5 102:14 105:24 152:20 169:5 generate 32:14 192:21 generated 48:25 49:10 61:4,11,23 66:20 101:9 109:17 118:24 130:4 159:5 160:25 161:3,5,8 169:16 170:19 173:23 174:10,14 217:15 231:18,19 231:24 232:1 233:18 generates 228:25 generating 113:7 113:7 generation 100:15 generic 38:2,7 39:4 102:20,20 132:23 175:4 generically 38:2 103:9 107:18 114:11 208:11,14 getting 70:4 145:22 146:2 149:9 gibson 5:5 6:5 10:16 13:22 gibsondunn.com 5:13,14 6:12,19 gist 146:1 give 14:17 24:5 49:7 133:8 140:18	156:6 166:23 167:17 177:4 184:13 192:9 211:11 225:23 given 106:2 124:4 176:15,17,19 196:15 217:16 248:12 gives 140:20 go 30:4 31:8 32:22 45:15 54:20 60:12 63:20 72:8 76:17 77:16 83:4,23 87:16,16 88:1 90:12,17 113:17 118:5,7,13 122:15 123:22 126:12,14 130:19,19 140:14 148:7 153:24 156:25 157:13 171:12 172:18 176:13,16 184:24 191:11 194:11 196:10 198:20,22 210:2 212:1 213:9 217:13 224:11 226:5 237:14,20 237:23 238:1,18 239:13,18 241:4 244:13 245:25 goal 70:16 goes 53:8 141:25 185:14,19 going 22:3 42:2 73:25 78:2 86:6,7 88:15 93:8 106:10 136:6,20 138:11 140:12,16 141:23 178:25 179:22,23 183:12 185:5 186:2 191:6 196:6	199:13 203:16 215:18 216:19 222:25 227:3 245:25 golden 75:3 good 13:14,21 15:7 21:10 76:9 156:3 157:20 203:20 google 231:13 gotten 225:17 granted 183:4,8 183:25 graph 84:22 great 38:11 139:6 144:19 163:14 168:23 170:24 172:25 173:25 185:23 187:4 202:22 238:12 growth 181:16 182:5 guess 97:19 199:2 203:23 guidance 219:21 221:4 225:18 guy 162:3 guys 153:22 224:7 h h 8:8 9:1 10:1 11:1 12:1 22:15,16,17 22:17 54:4 88:10 131:15 251:3 half 24:17 25:3,9 25:11 26:4,4 halted 76:24 77:11 hand 14:13 52:8 55:2 handed 185:17,18 handle 56:9	handled 170:2 208:21 249:8 handling 52:18 170:13 hands 245:16 handwritten 32:10 handwrote 31:19 hang 214:11 hannes 22:17 25:10,12 happen 71:11 75:1 100:24 happened 44:10 142:4 197:24 happening 112:3 happens 80:15,21 182:11 happy 151:10 204:24 223:14 hard 185:14 hardware 230:8 232:2 hash 108:24 109:7 109:11,14,15,23 109:24 110:3,21 111:6 192:2,10,13 192:14,15,21 193:4,15 hashed 100:3 108:9 113:23,25 191:20,23,24 209:21 210:15 hashes 111:23 191:18 192:22 193:13 232:6 hashing 109:18 111:9 112:6,23,25 113:6 hasnain 173:6
---	---	--	--

[head - identifier]

head 44:10 218:13 230:18 headed 40:1 86:7 header 48:10 heading 78:10 148:8 heads 17:4 hear 154:5 224:10 heard 229:14 238:19 239:6 243:15 heart 198:22 held 15:25 hello 157:19 help 89:20,24 114:25 192:10 224:20 helped 121:10 helpful 126:10,10 238:13 helps 16:5 209:19 hereto 33:19 43:17 46:15 54:19 63:16 64:25 90:20 92:3 105:3 106:9 127:24 138:20 163:5 178:7 184:23 194:6,25 203:3,6 213:18 heuristics 165:1,5 165:11,13 167:25 hey 226:17 high 31:5 139:12 139:16,18 143:5 145:22 highlighted 187:15 historical 23:5 24:23 hit 78:2 194:7 237:23	hive 9:19 10:9 36:14 37:3 54:4 54:14 59:1,7,13 67:8,19,20,25 70:17 76:2,3,5 84:9 85:15,17,23 86:21,23 87:1,3,10 87:17,17,18 88:11 88:16 89:21 90:1 90:5 91:3 92:21 92:24 93:25,25 94:9 95:12,18 96:4 97:5,10,11,13 97:16,24 98:7,9,12 99:6,7 105:16 112:11,21 113:4 113:19,25 114:3 114:12,16,19,21 115:1 116:9 138:6 139:12,16,17,19 139:20,21 140:1,6 140:8 141:13 143:7,16 159:22 165:7,8 187:11,14 187:20 198:2,2,6 199:10,18,22 200:8,25 201:9,10 202:9 236:7,24 237:21 hold 30:16 50:4 73:11,15,17,18 74:19 79:24 80:15 81:10,10,12 127:8 148:19,19 153:20 153:20,21 183:10 183:10 holds 73:7 74:2,11 76:12,19,23 hole 148:7 honestly 118:8	honor 241:13 hope 213:7 hopeful 157:1 hoping 42:14 156:17 hour 24:3,11,17 25:3,9,11 26:2,3,3 hours 21:4 23:3 26:8,9,13,16 28:8 28:15 30:8,20 hql 86:24,25 87:11 88:3,9,10,16,17 89:1,4 https 168:10 huh 118:20 hundreds 161:18 hyperlink 117:23 160:8 174:4 214:3 hyphen 93:12	identifiably 176:24 identification 17:25,25 33:18 37:23,25 38:5,6 43:16 46:14 54:18 63:15 64:24 90:19 92:2 105:2 106:8 110:8,12,13,16,16 110:24 111:8 113:5 127:23 128:13 138:19 145:4,5 147:6,7 150:8,8 155:2,3,9 163:4 178:6 184:22 194:5,24 198:11 203:2,5 213:17 231:7,10 identifications 39:18 identified 27:13 31:12 39:6 41:4 42:12 52:18,20 53:7 56:4 62:20 64:3 70:20 96:4 104:3,7 110:14,20 113:9 123:2 142:7 143:9 146:10,10 147:15 149:10,10 153:7 158:18 159:3 164:1 189:7 189:25 208:1,20 222:6 231:8,10 237:3,8 identifier 34:14,16 34:18,21 35:1,14 36:12 37:18 39:7 40:24 102:21 107:5,9,21 108:17 112:6 120:6,8,18 127:15 130:4
		i	
		i.e. 92:23 ian 7:17 13:25 icon 51:17 idea 241:11 ideal 183:3 ideally 183:3 identifiable 38:4,8 40:7 62:19 67:16 68:5 71:15,19 106:6 109:3 114:25 164:16 169:3 170:12,17 173:20,22 174:11 174:15,16,18 175:8,9 176:10,23 176:24 177:2,10 177:15,17 184:19 191:17,19 192:18 192:24 193:4 198:25 216:12	

[identifier - information]

131:8 148:22 149:19,24 151:8 153:11 154:17 155:7 174:24,25 176:17,18 227:11 227:21 229:3 230:8,9,13 231:1 236:4 identifiers 36:4 38:3,3 100:2 106:15,25 108:8 108:14,25 111:10 111:23 112:13,23 112:25 113:1,4,23 114:1,4 120:17 145:8,9,19 146:7 146:20 147:21 151:15 152:8,20 152:22 155:3 169:14 170:18 174:12 175:3,17 178:2 192:5 227:5 227:8 228:3,4,4,19 229:6,8,10,15,16 229:17 230:2,3,17 identifies 98:12 107:10 129:25 identify 13:12 37:20 40:9 44:2 52:22 53:9,21 54:5 56:9,22 62:3 63:6 68:24 69:15 70:17 78:15 83:13 83:25 84:5,7 87:3 87:10 105:25 110:19 112:7,13 117:4 130:13 134:1 144:15 152:8,11,18,23 159:12,25 160:2 162:25 166:12,17	166:24 169:17 170:20,23 171:18 193:3,23 200:14 205:25 216:14 217:4 236:19 identifying 10:5 37:6,8,9 97:4 105:18,19 122:12 173:10 identities 69:16 identity 34:8,9,23 38:1,10 68:25 69:6,7 70:1,6,13 71:15 161:17 162:6,13,16,22 199:1 idfa 107:12,19,20 108:3 230:16 idfv 230:15,16,18 ids 10:5 82:6 97:4 97:11 99:2,6 100:2 101:19 104:18 108:9 109:6 115:7,8 116:11 133:7,8 179:4 180:18 184:12 208:18 227:25 228:1 230:21 231:5,18 231:19 237:24 igid 227:7,10 229:18 illustrating 140:23 images 73:9 immediate 31:25 immediately 116:16 117:4 implementation 54:16 56:7 67:25 implemented 67:21	implies 174:16 225:24 importance 182:10 important 170:1 170:22 216:24 241:25 impose 73:4 improve 211:1 212:9 inaccurate 56:19 67:24 79:17 120:13 132:24 inadvertently 105:6 inauthentic 111:15,21 incentivized 243:10 incident 180:11 incidents 48:6 include 16:25 20:3 20:5,7,15,18,19,21 49:14,19 62:6 64:19 73:7 98:13 105:22 137:20 161:9 174:10,12 174:14,21 included 20:8,14 20:16 75:16 118:24 136:11 189:7 229:23,24 249:14 250:3 includes 17:1 40:22,23 147:14 169:14,16 170:17 170:19 229:18 including 28:9 38:21 169:7 240:2 inclusive 216:8	incomplete 117:22 incorporated 32:3 incorrect 75:15 154:14 independent 76:22 independently 112:18 index 110:3,4,22 110:22 individual 39:12 65:9 86:2,10 140:5,9 156:1 162:11 174:18 176:20 217:22 228:3 231:3 individuals 22:9 22:21 24:6 industries 169:9 216:6 industry 102:21 103:9 169:8 216:4 234:11 inevitable 156:12 infeasible 53:20 infer 205:12,12,13 info 93:13 95:20 95:20 102:25 207:1 infor 218:22 informal 44:4 information 18:1 38:19,21 40:25 41:11,11 48:24 49:1,4,24 51:20 54:5 62:12 71:13 71:14 75:8 80:24 93:4 99:1,1 105:18,20,22,25 106:4,4 107:10 109:12 110:4,22 114:24 120:20
---	--	--	---

[information - k]

127:7 128:21 129:9,13 132:8 135:4,15 137:23 138:1 145:6,14,20 147:18,19 150:4 150:16 152:12 154:22,25 161:6 164:16 169:3 170:7,8,17 173:20 173:22 174:11,15 174:16,17 184:19 189:9 193:4 198:6 198:8,25 200:6 208:20,21 209:6 216:12,18,23,25 217:3,9,20,21 218:8,15,19,23 219:11,18,25 220:16 221:1,11 221:16 222:5,10 222:11 223:17,25 224:17,24 226:14 236:10 239:23 240:7,16 241:4,14 241:18,21,23 242:3,9,24 243:2,5 243:7,12,21 244:4 244:9,15 245:1,18 245:21,22 infrastructure 16:20,21,22,23 17:4,9,10 18:18 19:22,25 20:2 188:1 initiates 172:16 inside 36:13 37:3 54:5 67:10 115:18 196:7 insofar 21:11 instagram 227:10 228:9,11,14,15	229:19 installed 131:5 134:5 instance 37:16 44:17 111:16 134:8 234:13 instances 82:5 209:3 236:3 instantly 196:6 institutions 209:9 instruct 28:4 128:17 129:2 instruction 43:6 instructions 25:23 153:10 integrated 190:21 integrity 72:19 112:2 intention 180:17 intentionally 177:3 200:3 interacting 60:16 interaction 235:7 interactions 137:17 interested 248:18 interface 235:6 interfere 76:12 intern 168:10 176:24 internal 16:6,24 35:12,12 45:23 47:4,20,23 48:1,2 52:21 55:22 56:15 63:8 100:24 105:16 116:23 117:15 139:10 142:15 158:4 164:19 176:25 195:6 201:15 214:21	internally 176:25 177:15,18 internet 161:17 internme 164:22 interoperate 146:12 interpret 153:10 162:14 167:5 224:8 interpretations 169:7 interrupt 21:18 165:21 226:6 242:14,14 interrupting 241:16 interruption 77:25 interviews 22:8,10 23:2 81:2 interworkings 146:11 introduce 184:11 introduced 54:5 invented 237:22 investigating 30:13 investigations 72:18 invite 209:5 involved 128:8 involvement 128:15 211:7 involves 128:15 ios 230:17,20 ip 40:25 41:11 106:3,20 118:25 137:22 159:6,8 169:15 170:18 irrevocably 116:16	isp 159:7 issue 42:3 156:12 156:23 224:21 issued 74:3,11 issues 31:1,3,10,12 41:2 48:6 208:4 item 217:17 j jams 7:4 jamsadr.com 7:11 jane 141:10 142:4 jd 141:11 job 1:24 249:5 251:2 jobs 187:10 188:2 188:2 john 7:19 13:10 141:7 142:3,12,17 164:11 172:18 john's 142:13,17 joined 52:20 josh 13:18 42:17 46:19 54:21,23 91:23 106:11 140:17 194:7 203:21 joshua 3:8 js 141:8 jsamra 3:15 jsc 1:4 2:4 json 234:24 judge 245:22 july 65:8 173:2 jump 171:11 june 65:6 jury 66:14 221:15 222:8 k k 22:15,16 64:10 64:17 175:21
---	--	---	--

[keep - lines]

keep 24:1 42:2 44:9 68:22 108:25 224:8 239:18 keeping 57:10 61:3,4 keeps 113:8 keller 4:5 13:20 kellerrohrback.c... 4:14,15,16 kelley 64:10,17 kept 82:6 102:8,9 key 36:11 110:17 170:9,11 193:12 193:18,22 kick 198:4 kicks 196:3 kids 75:20 kind 34:22,23 42:21 73:17 106:3 182:9 198:5 234:25 235:1 kinds 133:8 kindt 186:6,7 knees 87:18 know 21:16 23:17 23:18,19,21,23 24:25 28:3,5 29:5 35:23 41:20 42:20 43:22 45:20 46:7 50:12 52:6 55:6 57:14 59:18 60:2 60:18 64:11 66:9 66:10 71:25 77:4 77:5 79:6 80:17 80:19,25 82:1,22 82:23 87:19,22,22 89:21,25 90:11,16 91:2,19 92:16,16 93:2,24 95:19,19 96:14 99:16 103:3 105:23 107:12,17	109:12 114:12,13 118:11 127:21 128:24 129:1,3,23 129:24 130:6,7,11 130:11,20,22 131:18 134:16 135:22 138:9,21 144:9 151:17 157:6,22 160:13 162:14,23,24 163:10,17 164:13 165:17 166:1,3 171:10 172:8 178:3,17,21,23 179:10 185:13 186:3,9 187:23,23 189:4,14 190:7,19 190:20 191:3,5,8 193:21 196:19 199:11 203:21 204:21,24 205:1,3 205:10 206:3,10 207:5,10 208:9 209:25 210:5 212:16,17,17,22 212:25 214:5,12 215:20,21,24 218:14,22 219:1 219:17 220:8,15 221:8,22 223:16 225:19 227:7 230:12,18,20 232:14 235:1 239:3 242:6 244:6 245:24 knowable 179:5 knowingly 183:8 183:25 knowledge 45:10 102:1,16 177:22	known 71:3 168:11 knows 90:5 129:6 129:12 130:14 159:7 212:1 ko 4:6 kramer 55:5 kutscher 6:14 13:24	leader 204:15 learn 28:21 learning 144:17 165:10 232:24 learnings 24:13 leased 159:7 leave 241:7 245:16 left 55:2 148:9 185:17,18 legal 15:13 72:16 72:20 73:3,6,6 81:10,11 217:1,23 218:11,24 221:18 222:1,3 223:23 224:15 225:4 226:15 249:7 lesley 3:6 13:15 15:8 249:1 letter 10:16 129:9 level 16:2 139:12 139:16,18 143:6 145:22 180:12 levels 31:5 liar 162:1 licensing 212:9 life 20:15,17,20 lighthouse 212:14 212:15 likes 49:14 137:16 138:5 limit 199:18 limitation 17:2 line 65:22 100:11 148:12 187:15 211:14 223:8,12 223:22 229:21 245:12 249:15 250:4 251:4,7,10 251:13,16,19 lines 245:13
		l	
		l 1:21 2:20 22:16 195:8 248:1,24 l.i.p. 4:5 label 29:5 labeled 33:4 55:22 97:3 102:24 216:22 labels 232:7 laid 72:1 105:23 lands 233:22 language 86:24 87:1 88:11 89:2,4 languages 131:17 large 169:8 185:1 185:10 larrus 186:7,8 latest 93:21 188:22 laufenberg 4:7 13:19 157:11 launch 204:11 238:22 launched 54:7 67:11 204:12 laundering 73:7 law 3:9 4:9 5:8 6:7 6:15 73:9 laws 73:3 lay 39:25 168:16 lead 17:9	

[link - management]

link 51:17 165:3 168:12 214:5,13 214:14,15,16,16 214:17 215:1,3 linked 217:18,22 linking 214:6 links 115:20 164:20 166:22 167:17 list 44:11,14 45:5 92:13 122:11 124:5,6,12,15,21 124:22 125:22,24 231:4 listed 72:5 204:11 227:5 listen 154:2 222:20 lists 168:18 228:21 litigation 1:4 2:4 13:9 73:7,11,15,17 74:2,11,19 76:12 76:19,22 79:24 80:15 little 15:22 48:16 79:10 101:16 131:13 160:18 168:24 170:25 173:1 180:16 181:7 199:3 203:17 232:3 live 53:17 84:16 102:12 106:5 115:21 233:25 lives 36:13 37:20 89:21 90:1,5,12 102:14 198:2 living 15:19 llp 3:5 5:5 6:5 load 43:8 45:18 72:8 86:10 163:15	loaded 90:22 91:16 96:25 105:12 117:10 174:6 178:16 205:9 loading 91:9 105:4 194:3,9 locale 159:2,4 located 2:17 114:13 location 1:15 49:24 50:1 106:20 locations 118:25 locked 249:12 250:1 loeser 4:8 log 37:15,16,20 40:22 49:16,21 50:25 137:20 234:6,11,20 238:8 logged 132:6 134:1 137:18 212:2 logging 234:8 logic 165:14 login 212:1 logins 111:25 112:4 logs 41:23 198:5 211:21 long 15:21 21:2 22:24 23:25 53:1 53:4,22 91:14 137:7 138:8 169:2 177:1 221:1 240:10 longer 24:14 39:17 39:18 40:4,6 41:5 138:5 175:7 176:1 176:2,9,9 177:9 202:8,17 237:9	look 32:21 43:25 44:1 45:15,25 63:10,12,23 65:2 72:4 83:4 86:3 88:1 90:21 92:6 95:25 96:20 100:8 104:23 117:20 118:10,13 121:10 122:4,8 127:25 130:19 138:12 144:17 158:22 163:18 167:8 179:2,11 202:1 203:7 206:4 208:25 212:3,7 looked 30:8 92:4,5 160:6,13 166:22 167:16 looking 31:16 32:9 45:19 46:25 51:9 56:25 58:13 63:3 64:20 66:15 70:21 72:11 86:2 87:20 87:24 91:22 96:2 97:13,24 98:7,8 99:19,24 100:5,7 101:16 103:12 106:19 111:15,23 118:19 119:18,18 119:18 128:4 140:2,19 141:23 142:23 160:18 165:14,23 166:5 166:18 171:19 173:1 174:1 178:20 180:16 182:20 187:13 196:22 205:24 209:1 210:14 214:25 224:13 226:25 227:1,3	looks 56:6 117:22 156:12 165:7,9 167:1,12 lookup 104:17 los 7:9 lot 44:8 196:9 204:4 245:20 lots 90:14 120:16 lotttt 159:3 louis 186:7,8 lower 48:16 52:8 101:16 160:18 168:24 170:25 173:1 180:16 181:7 232:3 lu 211:13,20,22 lunch 126:16 144:21 156:25 157:8,20 lweaver 3:14 249:2
m			
m 5:7 macdonell 7:19 13:10 machine 144:17 211:2 232:23 248:10 machining 165:10 maid 228:6 main 137:17 maintain 48:18 97:16 198:21 maintains 51:20 majority 25:23 making 159:23 184:3 196:14 221:20 managed 16:9 management 15:24 17:10 20:16			

[management - message]

20:18,20 manager 16:1,3,4 16:4 24:15 25:5 219:20 manner 52:21 manual 144:16 map 34:15,23 83:4 84:14 137:1 142:16,19 181:1 198:8 202:8 216:25 242:3 244:4 mappable 176:2 198:14 mapped 115:7,8 116:3 141:18,19 196:24 197:7,12 197:21 mapping 10:4 41:6 82:19 85:18 85:21 96:17 97:3 99:25 102:4 108:7 142:13 158:19 175:25 176:3 179:22 181:10 182:10 183:6,23 196:23 198:10,17 198:21,24 201:8 201:14 202:2 206:21 mappings 101:19 143:22 maps 141:15 228:16 mark 33:12,15 46:9,10,23 54:21 54:24 86:5 91:23 106:10 138:16 163:1 184:24 194:1,3	marked 12:17 33:17 42:16,18 43:15 46:13 54:17 57:8 63:11,14 64:23 90:18 92:1 105:1 106:7 117:8 127:22 138:18 163:3 178:5,9 184:21 194:4,21 194:23 203:1,4 213:16,22 martie 6:14 13:24 masse 147:1 master 7:6 14:1,2 122:16,19,21 123:6,10,16,19 124:8,11,14,17,20 125:5,8,19,23 126:5,6,9,14,19,22 126:25 145:21 146:8,17 147:12 148:1,6,18,24 149:2,8,14 150:17 150:20 151:5,11 151:17 152:10,15 152:24 153:3,22 154:10 155:13,15 155:24 156:2,6,9 156:20 157:5 222:24 223:10 224:6,25 225:5,8 226:1,5,9,17,19 228:7 239:8,11 240:24 241:14 242:1,4,13,17,19 243:25 244:6,13 245:9 match 110:4,5,22 114:24 115:17 159:2 190:16,16 192:19,22 193:13	202:5 206:15 212:10,20 213:1 228:1 matched 191:10 191:18 192:3,20 193:15 207:6 matches 191:23 206:25 matching 190:22 191:1 material 26:14 materials 22:8 26:15 243:1 mathematical 109:13 matter 13:8 19:12 19:17 21:3 24:8 146:22 147:8 239:10,12 245:11 matters 18:21,23 174:24 175:1 matthew 3:7 mayur 22:14 24:16,20 81:4 md 1:4 2:4 mdl 1:3 2:3 9:20 9:21 10:24 12:6,7 12:10 90:24 163:8 203:14 mean 19:6 27:12 31:5 32:18 34:17 37:9,24 38:16,23 39:8,17,17 40:3,8 48:12 49:6 51:7 52:6 59:5,16 71:19 79:3 84:17 94:25 100:20 110:12 119:2 121:13,16,17,17 124:15 137:10 138:8 146:9 152:8	157:5 161:23 162:17,17 199:12 199:24 201:25 226:6,21,22 228:1 232:22 234:4,18 236:23 243:24 244:2 meaning 34:7,19 39:3 177:10,11 211:21 216:4 218:5 meaningful 235:3 meaningfully 68:4 means 33:22 34:5 48:23 58:25 59:1 93:24 103:3 108:16,25 109:16 136:24 161:2 205:14 232:20 240:9,11 meant 73:24 79:7 79:8 80:9 83:11 90:10 115:5 162:15 184:14,16 202:21 234:20,21 244:3 measurement 210:16 235:16,19 mechanism 202:8 meet 53:13 melamed 3:7 memory 240:5,13 menlo 15:18 mentioned 31:16 35:2 162:10 173:17 201:7 240:10 merely 81:12 238:9 message 171:1 210:24
---	--	--	--

[messages - noted]

messages 211:3,6	minute 194:10	move 135:21	60:16,18,21 90:11
met 39:15	minutes 24:22	223:5 226:23	90:16 92:8 96:16
meta 7:18 8:12,13	25:3,6,10 26:5,6	moving 74:23	117:23 118:5,12
8:17,18,22,23 9:6	156:7	101:2 168:23	121:5 126:13
9:7,11,12 10:6,7	misdn 230:5,7	msisdn 230:7	130:19 136:25
10:10,11,14,20,21	mishearing 151:25	mulmer 5:14	159:9 171:10
11:6,7,17,18,22,23	misreading 151:25	multiple 17:8,8	180:13 183:15,19
12:13,14 15:15	157:2	123:2 245:10	190:13 192:21
33:5 43:13,19	missed 104:5	n	193:3 196:18
55:1 96:24 105:8	missing 65:21	n 8:1 22:12,12,16	204:18 240:19
178:12 195:2	100:17 151:20	22:17,17 54:4,4	needed 31:20
213:25 227:9	mission 6:8	64:10 195:7	needs 122:8
229:11,17 230:23	mister 81:6	name 15:11,13	negative 70:4
metadata 49:19,22	misunderstanding	22:13 40:23 50:17	neither 81:14
49:24 50:2,11,13	152:3	76:2 80:25 82:20	245:15 248:17
61:3,12,23 62:7,10	mix 47:17	82:23 102:4	net 154:3,3
62:10 66:19 67:5	mkutscherclark	130:10,20 136:5	network 234:21
67:21 68:6,22,24	6:19	141:2,14 142:6	nevada 1:22
69:6,15 70:13,18	mobilizer 143:11	188:10 192:14	never 75:5 116:3
84:8,10,18 137:19	model 232:24	210:10,11 212:18	153:14,15 158:1
137:19 198:1,2	models 165:10	248:21	184:4,14
metaphor 75:2	modern 59:10	named 24:6 59:10	new 11:12 102:4
metrics 181:13	188:5	76:24 95:9 141:1	143:17 231:3
michael 1:13 2:15	modified 55:4	147:15 153:8	newly 104:17
8:3 15:1,14 247:1	65:8	names 103:10	newsfeed 134:9
247:12 249:5	moment 33:11,13	106:20 118:25	night 31:24 32:4
251:2	55:11 105:10	121:14,24,25	nodding 21:22
middle 126:17,23	128:2 136:9	141:7	non 100:17
155:18	179:10,11 185:11	native 203:11,15	normal 41:1
midnight 101:20	197:21 215:19	natural 192:25	211:18
mike 5:7 8:11 13:7	229:9 238:20	navigate 203:18	northern 1:2 2:2
13:24 15:13 43:14	239:7	near 204:23	notating 249:15
192:14,16,20,20	monday 64:8	necessarily 162:12	250:4
mill 6:16	money 73:7	162:14 217:8	note 33:4 155:21
miller 204:7	monitor 188:7	234:22	166:8 215:19
millions 161:18	montage 186:10	necessary 41:1	216:24 223:4
mind 15:10 30:24	morning 13:14,21	240:16,17 249:14	240:14 241:25
83:9 186:22	15:7 166:8 174:6	250:3	noted 33:10
245:25	mountain 13:6	need 21:21,23	160:17 225:5,8
minimization 17:2	mouse 185:14	51:25 57:2 59:2	241:2 243:21
		59:16,19,22 60:2,6	246:7

[notes - oh]

<p>notes 8:11 31:1,17 31:18,19,23 32:3,7 32:10,14 33:7,12 43:14 44:5,7,11,12 44:15,24 45:9,13 53:25 63:7,8 112:23 118:5,7,10 118:11 121:16,17 166:7 178:4 215:18 247:4 notice 17:17 213:5 noticing 13:13 14:8 notified 143:11,12 notion 161:17 noun 180:10 november 19:10 21:8 55:4,23 nuanced 221:2 null 101:12 142:8 143:20 nullified 236:15 number 8:9 9:2 10:2 11:2 12:2,18 34:22 38:20 43:2 44:18 46:10,12 52:5,7,8 55:1 91:6 100:23 105:7 112:3 119:20 120:19 131:19 140:3 163:8 178:12 185:8 186:22,25 189:17 192:15 249:15 250:4 numbers 43:13,19 64:5 90:24 185:4 195:2 203:14 213:24 nxyz.com. 141:11</p>	<p>o o 22:15,16,17 50:23 54:4 131:15 oo 13:3 246:12 oakland 3:12 oath 14:7 15:2 34:2 77:23 157:23 194:19 248:9 object 19:18 30:14 39:13 51:21 75:14 92:12 129:17 objecting 222:21 objection 14:6,10 14:11 19:18 20:13 27:7 28:1 29:18 30:18 35:19 36:23 37:11 38:14 39:20 40:12 41:17,17 42:10 45:12 46:16 46:18,22 47:16,25 49:20 50:5,19 51:5,22 53:11 54:12 56:2,14,20 58:3,12,20 59:8,17 59:24 60:23 61:13 61:25 62:8 66:1,7 66:21 67:7,23 69:9,18 70:2,10,15 71:1,8,23 73:12 74:7,16 75:14 76:15 77:1,8 78:24 79:5,15 80:5,11 81:19 82:11 83:6,16 84:3,3 85:13,25 86:12,19 87:5,12 88:4,18 89:7,15 90:6 92:25 93:16 94:1,15 95:2,13 96:7 97:8,17 98:1 98:2,15 99:11</p>	<p>101:24 102:13 103:25 104:11 107:13,22 108:11 108:20 111:13 114:5 116:7 119:5 119:14,16 120:4 122:6,10 127:9 128:14,25 129:17 131:25 132:19 133:19 134:13,22 135:6,14,25 136:18 159:13,20 162:8,18 166:14 167:6 169:20 171:9 172:4 173:15 175:12 176:6 177:24 179:6 186:17 187:12 188:18 189:1 191:4,4,7,13 192:6 193:10,24 197:3,16 200:1,16 201:5,12,23 205:5 206:7 207:8,16,23 208:8,15 209:18 210:17,25 211:8 211:16 212:11,23 217:23 218:10,24 220:20 221:17 223:5 224:10 225:2,3,7 227:2 233:12,20 235:10 235:21 236:5 237:4 238:4 objections 95:3 219:12 220:9 objective 8:20 objectives 46:1 objects 59:11 228:4</p>	<p>obligated 33:8 obligation 53:18 61:11,22 62:3 73:6 obligations 39:14 48:5 53:13 72:17 72:21 73:4,8 217:5 observation 225:23 observations 24:13 29:21,24 observed 27:9 obtain 98:11 obviously 159:5 occasions 18:7 71:20 occur 21:6 82:17 143:6 occurred 191:1 197:23 215:20 occurring 81:15 123:23 occurs 53:8 82:15 82:18 85:16 130:5 198:12 october 8:16 47:5 47:9,15 62:25 oculus 231:25 ofa 235:4 offhand 35:24 130:21 131:18 141:15 office 249:11 officer 14:6 offline 36:13 85:2 86:22 148:11 209:5,11 oh 60:11 63:25 73:21,24 100:5 104:9 113:16</p>
--	--	--	---

[oh - p.m.]

138:25 158:5 183:14 184:25 185:21 186:23 204:16 209:25 226:7 okay 17:20 18:4 20:25 21:21 22:2 22:6 24:4 32:15 33:1,25 39:8 40:2 42:13,24 43:9,24 44:3 45:5,8,15 46:2,6,19,25 48:15 52:1,11 54:20 55:18,20 56:24 58:8 59:5 63:10 66:13 68:15 69:22 70:21 71:17 77:13 77:20 78:4 79:8 81:22 82:2 83:10 83:12,20,23 85:5 86:5 90:21 91:10 91:15 93:8 94:12 95:24 96:19,21 98:10 103:12 104:22 105:12,14 106:10,18 107:5 107:20 108:4,15 111:9 112:9 113:22 116:19 118:2,7,14 119:22 121:3 122:18 123:10,16 126:20 126:20,24 127:1,2 127:25 128:19 129:11 130:22,22 131:24 133:13 134:17 135:21 136:6,20,23 138:16 139:5 140:2,12 142:11 142:18,23 144:2	144:14,19,22,25 152:24 157:9,22 157:25 158:8,22 160:4,12 161:10 161:12 163:1,12 163:20 164:5,14 166:10 168:23 169:13 170:15,24 172:23 179:8,12 179:20 180:16 181:7 182:20 183:21 185:7 186:4,14 188:3,23 189:6,22 190:5,9 190:11,12,25 194:1,13,16 195:4 196:21 197:17 199:2,13,16 201:1 202:22 204:2,20 205:3,15,17,23 206:5,12 207:12 208:13,25 210:14 212:3,6,20 213:2,9 213:13 218:7 219:7 220:7 221:9 221:23 224:4,25 226:23 228:6 229:22 238:13 239:3,5,11,20 241:2 242:16,17 242:18 246:3,5 older 83:14 84:1 85:17 188:1 once 114:19,21 143:21 167:7 176:1,8 177:16,16 194:8 196:24 197:7,12 198:13 200:12 201:19 202:13	ones 35:23 123:12 123:13 125:9 175:20 205:7 229:12 ongoing 72:17 75:1 187:25 online 59:12 196:20 onsite 209:6,10 open 55:9,10 61:7 79:9 106:14 124:4 128:3 152:15 185:22 opening 45:17 102:24 operate 24:20 operates 25:21 operating 121:2 211:10 operation 41:2 operationally 145:23 opinion 58:6 opportunity 64:12 213:22 opposed 58:6 59:13 104:19 139:13 141:23 188:1,6 opposing 46:16 118:14 opposite 179:23 185:14,20 opted 131:6 oranges 111:4 order 27:4 29:2,3 51:23 53:13 60:6 67:11 70:25 73:18 73:24 75:20 84:25 88:1 90:12,17 96:15,18 108:25	110:7 112:1,7 181:12 196:18,19 243:17 orders 73:10 ordinarily 35:16 ordinary 155:12 oregon 1:22 org 16:19 organization 16:13 17:7 original 34:15 38:10 39:6 83:23 110:6 138:7 177:12 248:14 249:10,21 originally 216:11 originated 134:6 os 231:17 our.internmc.fac... 168:10 output 92:23 outside 103:10 115:21 overall 48:4 195:13 override 73:4 overview 9:10 10:19 99:24 106:17 107:3 118:22 139:9,14 139:16,19 owner 143:10,12 143:15 oxford 155:22
p			
p 22:12,12 64:10 131:15 p.m. 65:7 77:18,21 127:3,6 144:23 145:1 157:15,18 171:3 172:21,24			

[p.m. - personal]

173:3 187:17,17 194:14,17 213:14 213:20 246:6,7 page 6:16 8:3,9 9:2,9 10:2,4,9,13 10:19 11:2,4,16,20 12:2,12,18 47:1 48:9 52:4 55:3,22 57:1 64:7,19,22 65:10 72:11,13 91:20,21 93:11,18 97:3 101:6 103:12 103:15,16 105:16 115:8 117:15 122:23 125:25 128:6 139:8 140:2 140:20 160:11 161:11 164:21 165:7 168:22 179:17 181:22 182:20 186:15,15 186:20,25 187:3,5 187:14,16 188:14 189:22 190:9 195:6 214:20 223:7 230:1 232:15 235:4 249:15 250:4 251:4,7,10,13,16 251:19 pages 1:25 45:25 47:10,18,20 91:14 92:5 153:7 168:1 185:6 210:24 211:3 249:14,17 249:17 250:3,6,6 paid 227:15,18 painting 75:4,5 palo 6:17 papagiannis 22:12 24:10 26:2	paragraph 61:2 70:22 71:14 82:4 99:25 103:19 107:1,2 115:6 136:23 158:13,16 158:18,23 159:18 162:7 167:12 173:13,17 182:21 216:21,23 233:2 paragraphs 106:16 parameter 210:16 pardon 97:2 park 15:18 part 16:15 18:22 28:24 48:4 51:13 51:23 54:2,15 60:8 62:10,15 66:5 81:21 83:24 84:9,12 85:4,15 86:15 88:10,11 89:17 90:8 94:6 95:15,22 96:11 98:17,23 99:13 100:15,21,21 103:6 107:7,15,15 107:24 108:22 109:9,17,25 110:8 111:16,18 113:6 114:8 115:1,18 116:22 127:11,19 129:4 130:2,11,17 130:25 132:21 133:23 134:15 135:9,17 138:6 144:4 146:20 150:20 151:9 158:24 160:19 168:6 173:23 184:20 191:12 195:12 197:20	200:10 201:9 209:21 212:25 218:2 221:12 234:13 particular 151:8 217:6 particularly 25:17 parties 3:2 4:2 5:2 6:2 7:2 132:9,16 133:2,8 209:4,16 228:5 241:7 partition 93:20,21 93:24 94:9 partitions 94:10 partner 190:16 206:21 208:4 partners 190:17 209:9 parts 84:19 101:2 party 13:13 19:7 27:3 131:4 133:7 134:4 176:14,16 176:19 177:6,8,15 178:1 180:18 184:11,18 191:14 193:11 227:13,20 227:24,25 229:5 248:19 passenger 18:15 passes 206:21 passing 210:15 pasted 211:24 patel 22:14 24:16 26:3 81:4,5,5,7 patrick 1:13 2:15 8:3 15:1,14 247:1 247:12 249:5 251:2 patterns 144:15 pause 17:11	pay 155:21 payment 227:18 pdf 186:13 249:12 250:1 penalty 14:16 247:2 249:16 250:5 pending 224:10 225:1 people 25:18 51:3 60:3 70:14 159:4 181:13 182:16 perfect 37:22 42:13 52:10 68:11 78:8 106:22 115:3 199:5,24 206:2 perform 209:11 performance 138:14 performs 104:17 period 91:7 109:2 113:11 114:17,22 196:16 249:18 250:7 periods 41:24 67:14 68:8 142:22 perjury 14:16 247:2 249:17 250:6 permission 176:15 183:8,25 184:4 224:8 permissions 183:5 perng 64:10,17 person 115:22 117:4 148:4 168:1 210:11 216:14,15 217:18 person's 115:15 personal 51:15 73:16 86:20 87:15
--	---	---	---

[personal - post]

88:9,23 89:12,19 90:10 94:8 95:8 95:17 96:13 98:6 98:19,25 99:15 103:8 107:8,17 108:1,24 109:10 110:2 111:20 114:10 127:13,20 129:20,21 130:3 130:10,18 131:1 132:4,14,22 133:24 134:16 135:20 136:4 144:6 162:21 170:10 190:18 192:8 211:19 216:18,22,25 217:9,10,20 218:8 218:15,18,22,23 219:3,11,18,19,24 219:25 220:12,16 220:18,21,23,25 221:6,11,16 222:5 222:10 223:16,25 224:16,24 225:16 226:13 231:22 235:23 238:5 239:23 240:7,15 241:4,12,12,17,20 241:23 242:3,9,24 243:2,5,7,12,20 244:4,9,15,25 245:18,21,21 personally 117:4 121:21 235:17 243:3 perspective 96:16 112:3 195:16 198:20 202:6 234:21	pertains 248:13 philosophy 57:20 phone 169:15 170:18 230:9,10 photo 41:3,4,7,8,9 41:23 49:9,10,15 49:16,17,25 50:1,9 50:11,16 51:1,3,10 51:16 57:22 58:10 137:13,14,15,15 137:17,21,22,23 138:2,4,4,10,12 161:9,15 173:21 196:11,12 photos 75:19,21 phrase 186:9 phrasing 58:23 physical 18:18 82:18,22 238:10 physically 42:7 44:6,23 118:12 picked 143:18 picking 204:14 piece 165:22,23 217:7 pieces 165:18 170:8 pii 166:21,23 167:14,15,15,18 167:22 168:22 169:6 173:7,14,17 209:21 210:15 212:9 215:22 216:1,3 piis 215:22 pin 156:13 157:8 pixel 131:5 134:5 206:15 207:22 208:2,5 238:6,7 pixels 188:25 189:10,11 210:16	place 15:11,14 53:5 54:14 109:5 109:6 111:15 184:5,8 211:23 248:6 places 48:14 plaintiffs 2:16 3:4 4:4 13:16 64:2 76:25 146:10 147:16 149:10 152:1 153:6,9 156:10 plan 11:16 planning 204:14 platform 84:23 85:4,7 138:15 196:8 207:14 233:11,19 235:8 platforms 7:18 please 13:12,13 14:9,13 21:16 32:16 52:4 55:12 86:17 105:10 138:17 162:3 163:2 182:24 183:13,20 201:1 203:7 204:10 222:22 223:4 225:10 239:19 plus 47:21 202:18 243:6 pm 204:7 210:12 point 36:17 53:7 67:2 74:3,11,21 76:9 79:25 95:11 97:16 110:18 115:16,23 116:2 148:11 154:2 156:3 161:13 180:2 183:11 184:1 192:5 193:8	193:22 197:24 198:15 199:4 210:11 215:16,23 222:21 236:18 244:23 policies 41:25 45:24 47:11 56:12 80:14 116:21 143:14,15 193:1 policy 8:15 43:21 45:23 47:4,8,14,20 47:23 48:1,13 52:12,24,25 53:2,3 53:8,10,12,19,21 53:23 54:9,16 55:25 56:4,10,23 58:7,23 60:20 61:10,16,17,22 62:2,24 63:4,7 66:18 67:3 68:10 68:13 143:18 162:12 166:25,25 168:11 174:2,8,9 191:16 215:15 poor 143:2 poorly 144:1 popped 41:3 populate 85:1 position 33:7 129:5 145:11 156:21,22 243:4,5 244:8 possess 193:18 possessed 44:23 possible 32:16 98:11 113:25 114:11 196:25 197:8,13 217:6 229:3 237:19 post 51:16 57:21 57:22 58:9,10
---	---	--	--

[post - processes]

61:3 66:19 67:6 67:20 84:11 161:8 196:11,12 posted 49:9 51:11 posts 50:9,10 51:2 potatoes 111:5 potential 113:5 115:13 potentially 24:3 93:4 170:12 potpourri 186:10 prac 234:11 practice 97:15 210:7,15 234:11 practices 29:11,12 34:12 55:25 80:14 precise 202:20 precisely 147:17 predates 166:3 preparation 25:19 29:15 32:6 64:3 80:13 88:7 134:23 135:9 136:2 148:4 153:18 170:11 172:14 179:14 211:17 215:10 221:24 238:25 prepare 22:6 45:5 51:12 73:14 81:20 86:15 87:14 89:10 89:17 90:7 94:6 95:6,15 96:11 98:3,16,23 99:12 103:6 107:6,14,23 108:22 109:8,25 111:18 114:8 127:11,18 130:16 130:24 132:1,12 132:21 133:22 134:14,19 135:1,3 135:10,12,19	136:3,10,10 144:4 148:5 162:20 170:2 177:25 188:4 212:24 218:20 219:6,23 220:11 221:7 225:14 231:21 235:11 prepared 88:21 108:5,6,12 111:11 112:12,22 122:14 125:3,16 129:14 129:18 130:1,8 145:7,16 146:13 146:25 148:10,13 148:20 149:21 152:4 153:12 178:3,11 188:24 189:11,14,15 206:9 207:13,19 219:14,22 221:24 222:7 226:4,8,20 243:19 244:16,21 preparing 26:8,10 80:13 113:3 present 7:16 13:19 22:21 26:19 27:14 presenting 115:19 preservation 73:10 presumably 239:3 prevent 113:5 198:23 previously 12:17 92:19 175:3 197:1 197:9 201:22 primarily 27:21 prior 47:9,11,11 47:15,18 64:20 67:13,18 68:7 71:10 88:24 97:15	102:5 119:19 173:17 199:4 211:6 227:9 248:8 prioritization 180:14 priv 57:8 privacy 10:23 13:9 16:11,12,13,14,16 16:20,21,22,25 17:4,9,10 19:22,25 20:2 27:10,12,24 28:11,22 29:11,12 30:12 31:9 47:11 48:4 50:2,18 57:23 65:24 116:22,24 117:21 160:9 163:9 164:23 166:12,17 167:4,23 168:5,14 168:18 180:3 181:2,15 182:4 189:23 190:22 198:19 204:7,9 210:12 214:16 215:14 privilege 28:2 privileged 128:16 129:7,10 pro 96:8 proactively 139:25 166:25 probably 24:16,22 121:10 159:3,6 185:10 204:22 problem 35:8 67:1 68:17 74:1 99:23 159:16 184:3 186:24 204:5 242:15 problematic 183:7 183:24	procedure 139:12 139:13 249:19,20 procedures 56:13 proceedings 248:5 248:8,9,15 process 25:14 34:13 37:25 38:6 38:9 40:16 53:4,6 54:1,2,3,3,7 62:18 68:7 70:17,23 71:5,7,20 72:23 73:3 74:5,13,17,22 74:23,25 75:6,6,24 76:1,13,20,23,24 77:10 78:11 79:12 79:22 80:2,16,20 80:21 81:9,12,13 84:9 85:15 97:5,9 110:8 111:8 112:11,21 113:3 113:20 115:2 117:1 130:12 139:17,21,22,23 142:1 143:7 146:21 150:14 151:10,22,23 152:5,21 154:18 154:24 155:7,11 159:22 170:3 184:20 187:22 190:15 191:12,15 196:3,14 198:11 200:7 201:9 202:11 208:22 209:22,24 236:8 237:21 processes 17:24 24:19 36:5 38:20 39:11 67:19 81:16 101:1,3 108:13 145:3,12 147:5
---	---	--	--

[processes - question]

150:6,7 152:13 189:8 208:20 236:8 processing 240:25 produce 32:16 238:23 produced 33:4,8 43:12 46:6 94:3 94:17 97:18,19 118:15 174:3 178:10 214:2 243:1 producing 160:15 241:11 product 12:5 15:24 16:1,3,4,4 16:12 17:6,7,10 25:4 75:17,20 76:2 84:24 85:1 115:12 116:12 128:18 161:14 200:4 205:3,10 219:4,20 220:24 225:19 242:13 production 32:1 59:12 62:11 84:7 84:12,16,18,20,21 85:4,19 102:15 137:18 210:20 products 16:8,9,14 16:17 204:10,11 204:14 210:4 229:24 professional 2:21 248:2 profile 1:4 2:4 13:9 35:3 49:9 115:11,15,20 116:10 profiles 115:8	program 48:4 116:23,25 programmatically 181:1,11 prohibitively 193:16 project 57:15,16 57:17,18 212:15 properly 217:4 proposal 189:23 190:8 proposed 190:23 210:4 protect 116:22 117:1 protections 109:5 117:1 protiviti 19:4,5,7 19:15 protocol 94:18 95:4 96:9 97:19 97:20 provide 67:11 125:20 128:21 180:18 243:10 provided 26:23 32:13 44:16 48:25 49:11,11 50:1 60:2 66:5 92:13 121:23 188:17 249:19 250:8 provides 48:2 providing 49:5 139:18 pseudo 34:11 176:18 pseudonym 113:20 pseudonymization 17:24 20:4,6,12 33:21 34:5,6,11,14	34:20 36:6,7 53:4 53:6 54:6 62:18 67:10 68:1 71:5,7 71:9 74:13 75:23 76:1 85:16,16 101:11 109:19 113:20 139:23 145:4 147:6 150:7 155:2,10 175:5 197:23 198:10,12 202:11 pseudonymize 70:25 192:4 pseudonymized 176:18 192:5 208:19 pseudonymizing 71:21 public 51:18 161:16 publicly 50:10 51:3,11 publisher 131:4 134:5 pull 16:5 29:25 91:1 pulled 44:22 153:7 pulls 104:17 purely 36:7 purpose 17:2 47:14 53:5 66:12 80:10 109:18,23 111:9 112:24 116:9 144:15 145:20 purposes 21:22 155:1,5 235:16,19 pursuant 94:17 put 17:11 81:10 109:5,6 120:15 121:10,19,21,22	123:18 125:13,13 126:7,8 156:13 157:8 193:14 203:16,19 211:23 220:4 231:5 234:12,17 235:6 putting 235:4 pwc 9:16,17 11:13 11:14 27:23 28:11 28:15,18,22 29:16 30:13,20 31:1,8 44:18 64:5,17 65:19,23 66:5 185:4 186:8 188:17 pwc's 26:19,24 27:5 28:9
q			
qualification 170:22 qualified 135:23 queriable 102:16 queried 235:5 237:19 queries 96:18 query 86:22,23 87:1,2,11,25 88:10 89:22 90:13,17 93:5 95:18,22 96:14 99:17 114:12,14,15,16 114:22 querying 86:21 104:19 question 17:12 21:17 22:2 28:6 34:3 35:7 37:13 39:2 42:5 61:15 61:21 66:16,22 67:17 70:8 71:18 74:9 79:9 83:11			

[question - record]

83:17,24 85:10 86:2,18 87:6,7 88:7 91:17 92:8 95:17 97:14,21 98:20 106:23 110:11 114:2 117:12,12 118:2 118:21 120:12 124:5 126:23 129:8 132:23 134:23 135:8,15 136:8 151:14,18 152:1 153:15,16 153:19 154:4,5,19 154:21 155:12,14 157:4 159:14 164:17 166:20 167:13 168:13,13 172:2 175:2,14,15 185:25 186:5 189:3,14 192:11 193:5 196:24 198:7 199:3 201:1 207:25 218:21 219:9 221:7,25 222:21,23 223:2,7 223:11,14,21,24 224:13,23 225:1 225:10 226:11 233:7,14 236:17 244:19,19 questioning 100:11 126:18 questions 24:17 39:22 69:21 83:8 93:9 98:4 112:16 112:17 114:11 118:17 125:17 149:21 150:24 164:18 168:11 185:5 197:18	199:14 213:3 quick 33:11 quickly 110:3 189:20 quit 116:2 quite 158:1 quote 218:12 240:7,7 r r 22:15,15,15,17 36:9 64:10 120:1 195:8 251:3,3 r&s 250:1,9 rabbit 148:7 rails 222:25 raise 14:13 raising 164:18 ran 188:7 random 36:9 70:24 71:4 78:17 113:7 115:25 237:25 rate 212:21 213:1 rates 212:10 rationale 58:7 198:22 raw 234:8,11,20 234:22 238:8 raymond 164:10 164:12,17 167:16 rblume 5:13 reach 197:8,13 reactions 49:14 137:16 138:6 reactivate 196:17 read 28:18 29:1 55:17 61:9 69:2 72:25 79:18 99:22 101:5 104:13 117:19 139:4,5,14 159:19 168:1	171:11,16 181:21 182:7,24 183:1,13 183:15,20 189:20 189:22 209:1 216:19 220:5 222:22 223:2,9,14 225:22 226:22 237:19 241:7 243:15 244:3,7 245:12 247:2 reading 27:9 30:20,23 31:15 55:20 60:13 82:4 104:13 105:6 117:10 159:15 163:19 166:15,16 167:9 171:15,23 178:19 204:17 217:14 232:11 249:23 250:9 reads 99:25 195:2 ready 117:13 172:2 186:3 real 141:6 161:17 realize 156:23 really 159:9 169:25 171:5 173:4 185:14 205:13 219:7,8 221:19 238:13 reason 62:1 68:22 68:23 69:5,14,25 70:4,6,13 77:7 92:20 110:2 116:20 153:12 184:17 224:7 251:6,9,12,15,18 251:21 reasonably 217:21 reasons 77:12 181:14	rebecca 1:21 2:20 248:1,24 recall 21:3 78:12 90:2 103:1 158:15 recalled 136:13 recap 26:1 receive 122:24 received 166:13 174:5 191:9 205:9 recess 32:25 77:19 127:4 144:24 157:16 172:22 194:15 213:15 recite 240:5,13 242:7 recognize 91:18 91:20 139:2 recollect 119:17 124:6 126:2 recollection 30:7 31:7,22 93:10 99:15 103:8 121:6 121:8 238:25 239:2 recommend 244:24 recommendation 60:7 record 13:5 14:5 15:10 21:22 32:22 32:23 33:2,23 34:1 43:11 44:2 54:25 64:1 72:25 77:16,18,21 90:23 96:23 102:7 105:7 122:15 123:21,22 126:11,12,15 127:3,6 134:18,18 138:7 144:22 145:1 153:24 157:12,15,18
---	---	---	--

[record - replacement]

158:3 163:6,25 170:16 172:17,19 172:21,24 179:3 185:1,13,16 194:12,14,17 195:1 203:10,13 209:2 213:10,12 213:14,19 214:1 215:7 221:21 223:5 225:9 235:23 237:15 238:19 239:18,19 239:20 241:2 243:21,23 244:14 245:12 246:1,3,6 248:9,12 recording 78:2,5,6 195:19 196:1 records 139:25 recursively 171:20 redirect 117:21 160:8 214:15 redo 204:18 redundant 184:3 refer 30:25 35:9 35:13,18 36:2 42:5,8 50:20 58:21 61:15,19 72:2,21 84:21 105:24 118:5,7 131:1,2 155:20 162:6 215:18 reference 48:9 105:17 106:24 136:22 195:19 240:18 referenced 136:14 218:9,16 245:7 249:6 references 245:14	referencing 240:1 243:1 referred 52:14 54:2,3 62:1 70:23 71:3 79:11 80:9 171:25 215:21 227:24 230:21 referring 23:8 26:25 27:18 29:4 53:24 54:1 62:23 124:1,1 128:2,7 133:10 149:3 160:25 167:23 171:4 172:11 202:17,18 206:11 227:22 refers 97:18 99:20 103:22 104:14 106:15 112:23 174:2 209:20 216:12 221:11 222:15 232:4,6 reflect 139:11 140:4 195:11 237:1 245:5 reflected 243:22 reflecting 142:24 reflects 140:5 refresh 31:21 42:21 55:8 63:11 96:1 121:5,7 238:24,24 239:2 refreshed 239:4 regard 17:21 28:11 29:13 39:9 56:1 65:24 69:4,7 69:12 72:21 74:24 76:24 93:25 95:3 129:9 145:2 155:10	regarding 24:18 80:24 122:9 125:3 134:19 136:17 196:23 regardless 217:16 regards 39:10 80:14 122:25 registered 2:21 141:13 248:1 regular 187:9 220:24 regularly 182:13 regulations 73:3,8 161:25 reinforce 182:10 reiterate 66:8 133:6 reiterating 236:6 relate 18:13 29:8 related 16:14,16 18:14 23:9 125:9 145:3 221:25 230:17,20 relates 1:6 2:6 122:11 145:6 148:15 164:15 226:11 relating 18:23 27:24 28:21 31:2 31:4,10,12 relationship 36:18 116:12,13,14 137:25 184:17 relative 248:18 released 249:21 relevant 25:18 26:18 relied 44:12,15 relink 216:15 remainder 26:11	remained 142:9 142:10 remaining 26:7 137:1 remains 138:1 142:17 remember 21:7 31:6 53:25 79:17 102:19,22 103:11 121:14,25 141:14 161:14 166:2 188:10 230:16 231:16 reminder 12:5 205:4,11 remote 14:7 15:18 remotely 1:14 2:18 248:6 remove 43:6 78:15 181:15 182:4 237:24 removed 176:3 rename 227:9 renfro 22:11 23:4 23:12,25 24:2 26:2 164:10 169:1 171:1,17 172:14 173:2,18 repeat 35:7 43:1 87:6 replace 36:15 37:17 70:24 78:17 82:5 97:11 237:24 replaced 37:4 142:2,3,5 198:5 236:13 replacement 36:9 36:11 71:3 78:11 97:10 115:25 116:10,15 236:14 237:25
---	--	---	---

[replaces - right]

replaces 139:24 199:19,21 200:12 201:19 replacing 97:6 report 48:6 reported 1:14,20 2:19 reporter 2:20,21 2:22 13:11 14:4 14:12,15 21:13 33:18 43:16 46:14 54:18 63:15 64:24 90:19 92:2 105:2 106:8 127:23 138:19 153:20 157:13 163:4 172:16,18 178:6 183:10,12,15,19 184:22 194:5,24 203:2,5 204:19 213:17 248:2,3,3 reporting 73:8 reports 166:13 represen 107:15 represent 13:16 93:7 109:11 representation 93:3 94:6 96:11 127:12 135:18 representative 1:13 17:15 30:11 38:19 51:14 66:17 73:14 87:14 88:8 88:21 89:10,18 90:9 95:7,16 96:12 98:4,18,24 99:13 103:7 107:7 107:16,24 109:10 110:1 111:19 114:9 127:12,19 129:19 130:2,9,17	132:2,13 135:1,10 135:18 136:1,2 144:5 220:10 225:13 235:12 243:20 represented 51:16 150:25 representing 86:15 108:23 130:25 represents 192:16 request 31:25 48:19 62:14 66:11 80:21 156:10 238:23 240:6 requested 67:3 248:16 250:1,9,10 requests 39:12 require 191:22 requirement 74:20 79:25 requirements 16:6 28:25 48:3 73:6 requires 158:25 159:8 rereading 55:18 research 209:9 researched 206:9 reserved 241:8 reset 153:24 resolved 156:17 156:24 resources 168:11 respect 57:2 245:4 respond 223:3 respondent 206:21 207:1,6 responding 223:4 response 125:17 responsibility 58:15 61:6	responsive 221:20 rest 171:15 212:4 212:4 restate 44:13 restoration 195:20 196:1,19 result 129:1 234:13 resume 157:1,8 retain 66:18 67:5 retained 60:5 retention 17:1 20:22 41:24 67:14 68:8,10 73:4,6 142:22 191:15 193:1 return 57:19 100:11 249:17 250:6 returning 52:3 78:9 82:2 reversion 214:22 review 26:15 29:10,15 33:12 55:11 64:12,13 105:10,13 138:22 179:13 190:13 209:6,11,12 213:22 215:3 245:16 248:15 249:8,10,13 250:2 reviewed 22:8 26:17,22,24 27:14 29:20 44:8 45:11 47:10 65:15 136:13 215:1 242:25 reviewing 26:14 28:8 32:4 190:14 revision 97:3 105:15 117:15	139:9 179:18 195:9 rewritten 142:1 rid 36:8,15,21 37:2,4,17,18 71:2 78:11,17,19 79:1,4 82:7 83:5 85:12 85:14,18,20,21,24 86:11 87:20 99:10 99:10,17 100:1,12 100:16,16 101:9 101:12,18 102:4,8 102:9 108:7 116:16 137:25 139:24 141:17,18 141:20 142:4,13 142:13,19 158:19 174:22 175:7,24 175:25 196:23,25 197:2,7,12,13,20 198:4,7,11,14,15 198:17 199:5,8,10 199:19,20,22 200:5,12,14 201:4 201:6,8,8,11,13,14 201:19,19,21 202:1,13 209:21 227:12 236:14 237:25 rids 10:5 74:6,15 74:25 82:6 97:4,6 97:10 98:13 99:2 99:7 101:19 103:13,19 109:5 115:7,8 116:9 141:16 right 14:13 23:13 27:16 28:17 31:15 37:13 42:25 44:20 44:25 45:3 51:21 52:8,22,24 54:10
---	--	--	---

[right - scope]

62:21,25 65:25 66:6 75:12 76:13 77:23 78:5 95:25 97:12 102:6,10 108:10 119:10 121:4 126:2,3,5 128:9 129:7,15 134:21 136:11,14 140:20 142:20 143:4 146:18 148:16 149:7 156:5,8 157:23 158:20 160:9 164:21 167:19 168:3,4,7,20 169:11 171:24 174:19 175:20 179:5 180:23 186:9 188:14 190:14 200:11 204:6 214:25 220:6,8,13,15,19 222:24 223:15 224:14 233:7 243:24 244:6,17 rights 18:17 ring 6:6 13:23 road 6:16 21:15 rob 13:21 33:5 125:4 129:5 153:17 155:22 222:9,20 223:18 223:22 robert 5:6 rohrback 4:5 13:20 role 15:23 19:22 23:18,20,22,24 51:14 113:2 roles 17:8	romano 1:21 2:20 248:1,24 room 32:19 122:3 136:10 209:7,7,23 roomba 143:17 rooms 209:17 rose 13:23 rosemarie 6:6 rotated 100:3 108:10,17,24 rotating 100:3 108:9,17 113:23 roth 22:17 rough 24:5 roughly 24:11,20 routinely 187:21 row 142:14 205:18 205:19 210:14,22 212:7 237:14,21 rpr 1:21 248:24 rring 6:12 ruecker 205:1 rule 75:11 rules 21:15 144:16 165:9 250:8 run 59:13 99:7,8 100:14 104:16 114:16,21,21 140:9,10 187:16 187:21,24 198:3 201:10 running 75:7 76:6 113:4 140:6 143:1 187:25 runs 76:1 139:21 187:8,21 ryan 22:15 25:2,3 25:4	s s 8:8 9:1 10:1 11:1 12:1 22:12,15,16 22:17 50:23,23 195:8 251:3 safe 115:16 190:22 safeguards 20:1,9 20:10,15 21:1 46:1 111:15 182:19 sake 36:7 72:25 80:12 85:15 119:7 215:9 216:7 225:18 228:9 salt 100:3 108:9,17 113:23 193:12 salts 113:7 sample 141:16 samples 186:10 samra 3:8 13:18 33:13 42:17 46:19 140:18 san 6:10 sanctionable 226:24 saturday 174:6 205:9 save 153:1 saw 91:21,22 95:8 118:3,6,13 163:23 214:23 235:3 saying 60:14 124:12 150:21 154:4 242:22 245:17 says 44:20 48:12 48:17 52:18,20 55:4 57:1,7,21 58:14,25 61:2 64:7 68:16,21 78:14 82:3,5 91:2	93:12,14,19 94:12 94:21 100:10,12 100:14 103:13,18 103:21 108:7 115:6 136:24 137:6 150:5 151:15 158:12,13 160:11,19,22 161:14,22 163:9 167:12 171:2,4 173:4 179:20 180:3,17,25 181:7 204:9 206:17,19 206:20,25 211:1,5 224:14 228:18 229:15 230:2,7 231:17 236:17 242:2 scale 100:22 180:14 181:1 scenario 101:12 193:18 200:3,9 207:5,20 208:12 210:6,6 scenarios 231:7 scenes 196:10 schedule 187:9 188:2 249:10 scheduled 187:16 188:3 scheduling 187:10 187:10 schematization 25:4,11,13,14,17 25:22 scientist 89:25 90:15 scientists 89:20 90:4 scope 19:18 20:13 27:7 28:1 29:18
---	--	---	---

[scope - separate]

30:18 47:13 51:22 53:11 58:12,20 59:8,17 60:23 61:13,25 66:7 69:9,18 70:2,15 71:1 73:12 74:7 76:16 77:1,8 78:24 79:5,15 80:11 81:19 82:11 83:6 84:4 85:13 85:25 86:13 87:5 87:12 88:5,19 89:8 90:6,8 93:1 94:2,16 95:2,13 96:7 97:17 98:15 99:11 104:11 107:13,22 108:20 114:5 116:7 120:4 122:10 127:9 131:25 132:19 133:20 134:13,24 135:16 145:15,25 147:3 159:20 162:8,18 166:14 167:6 169:20 172:4,5 173:15 188:19 191:7 192:6 193:24 199:6,8,12 205:5 206:7 207:8,23 208:15 209:18 210:17,25 211:8 211:16 212:11,23 218:10,25 220:20 221:13,17 222:7 222:11 233:12 235:10,21 236:5 238:4 scoped 11:4 132:15 133:4,7 178:13 179:4,17	scott 22:11 164:10 169:1 171:17 173:17 scrape 82:7 85:20 102:8 scraping 17:2,3 18:24 20:16 screen 126:7,8 140:17 203:17,19 screenshots 186:11 scribe 144:2,3,5,6 script 100:15 140:5,7,8,23 142:25 187:8,25 scripts 140:9 scroll 185:14,19 scrolling 236:21 scuba 89:13,14,19 search 83:2,5 85:23 86:10 87:16 87:19 88:15 92:23 113:25 114:3 searchable 85:12 95:12 99:10 searched 96:5 searching 197:9 seattle 4:12 sec 128:5 148:6 second 18:15 58:5 71:18,18 72:17 103:16,19 106:12 140:2,18 141:3 158:22,24 160:19 161:10 179:23 190:13 195:21,22 196:22 206:4,4 seconds 131:20 211:12 section 72:9 100:13 158:11	183:2 216:21 sections 240:1 security 72:19 112:2 182:14 see 39:25 42:23 43:4,10 48:8,16,20 51:4,7 52:19 55:7 55:16 56:25 57:5 57:6,11,12,20,24 57:25 58:1,9,17,18 59:3,4 60:16 61:1 61:8 65:14 68:16 69:1,2 78:20,21 80:3 82:3,8,9 91:8 93:11,14,17,22,23 94:14,19,23,24 99:20 100:10,12 100:13,18,19 101:17,21,22 103:2,18,20,24 104:1 105:19,19 106:14,24 115:9 115:10 118:6,13 118:14 126:7 136:22 137:4,5,8,9 156:11 158:16 160:20,21,23,24 161:19 162:4,5 164:19,25 165:3 166:8,10 167:20 167:21,24 168:5,6 168:24 169:11,12 169:18 170:25 171:6,7,22 173:12 173:13 178:15 179:20,25 180:5,6 180:17,20,21 181:3,4,18,19 182:21,23 188:20 188:21 191:23 192:19,22 193:15	195:19 204:12 206:23,24 207:3,4 209:10,13,14 211:4 215:19 227:4 228:18,22 230:2 232:3,8 236:16,20,22 seeing 210:6 218:17 seeking 125:1 seeks 38:19 135:15 146:7 seen 17:17 46:2,4 47:8 55:13 160:8 163:21 164:4 210:9 215:8 232:25 segment 205:20 206:6,8,22 segments 206:13 sending 147:25 204:8 211:6 sense 177:2 199:25 senses 111:23 sensitive 173:5 sent 64:8 65:18 122:12 205:7 sentence 52:19 57:12 58:1,5,5,14 58:24 59:3,4 60:1 69:4 73:20 78:21 82:9 100:19 101:6 101:17 104:14 108:6 136:24 169:23 173:13 182:21,23 236:17 237:1 sentences 69:2 159:18 169:10 separate 46:8 69:20 148:11
--	---	---	---

[separate - speaking]

166:19 168:1,21 september 204:8 series 49:18 89:1,5 94:9 109:11,12 191:18 serious 242:8 serve 85:6 served 84:25 service 72:18 134:7 137:14 session 176:22 set 20:15 33:16 34:18 38:4,8 60:21 107:9 111:10 131:3 134:3,6 152:13 165:9 170:7 215:6 215:12 240:7 248:6 sets 211:2 238:9 241:18 setting 50:15,18 50:22 193:20 235:7 settings 50:2 57:23 84:11 setup 210:3 sev 180:3,7,8,11 181:2 seven 18:8,12 22:20 24:6 26:8 sever 116:13 137:25 severable 175:8 severed 36:18 116:4,16 177:16 severing 198:12 shackleton 22:16 25:6 share 42:16,22 103:5 115:22	123:20 135:19 140:17 161:18,21 209:3,8 shared 184:15 209:16 sharing 161:15,22 181:9,12 182:1,3 228:10 sheet 210:12 212:18 shift 215:20 short 50:24 shorthand 2:20 35:5 248:2,10 show 42:22 138:23 showed 137:21 showing 142:25 sic 33:13 58:22 111:24 141:8 158:1 164:22 194:2 sid 176:4,7 side 131:11 sign 249:16 250:5 signature 248:24 249:21,23,23 250:9 silence 224:8 similar 47:13 80:15 116:11 119:7 190:22 191:20 193:14 217:1 230:24 simple 25:22 40:21 78:14 158:13 219:8 simpler 112:7 simul 196:5 simultaneously 30:3 104:8 113:13 125:21 147:11	151:16 222:18 224:3 242:12 244:11 single 85:19 174:25 176:2 sit 30:10 81:23 218:7 219:10,17 220:15 221:15 site 78:18 79:2 234:16 sits 199:10 sitting 32:19 122:3 six 143:6 245:13 size 109:14,15 skipped 11:9 63:20 slightly 79:17 192:12 slow 217:14 slower 183:13,16 183:20 smith 141:7 smith's 142:3 snapshot 79:12 80:9,17,24,25 81:7 81:10,15,17,24 snapshots 74:19 79:24 software 23:9,23 24:12,21,24,25 25:8,12,21 26:21 88:10 104:20 143:8,17 144:3 165:16,23 195:15 solemnly 14:15 solution 82:5 solutions 16:25 249:7 solve 16:25 somebody 175:6 182:9 211:21,24	someone's 51:11 soon 32:16 sorry 13:20 30:17 33:3 34:1 44:13 60:11 76:15 78:1 93:13 100:5 103:16 104:5 109:21 113:16 114:20,20 120:1 131:21 136:23 140:14 144:13 154:20 158:6 165:12,19 171:2 172:5 177:11,13 189:18 194:7 200:23 209:25 217:12 223:12 226:5 227:12,17 229:13 sort 171:11 sorted 91:6 sounds 79:17 source 34:8 41:14 80:23 92:17 101:18 110:19 177:4 179:2,4 184:9 sources 85:12 span 109:1 spark 93:9 speak 21:19 22:24 23:25 27:8 30:1 148:13,22 231:22 speaking 28:3 30:3 34:21 51:15 104:8 113:13,18 125:21 147:11 151:16 165:20 192:7 222:18 224:3 242:12 244:11
--	--	---	---

[speaks - street]

speaks 145:3 special 7:6 14:1,2 122:16,19,21 123:6,10,16,19 124:8,11,14,17,20 125:5,8,19,23 126:5,6,9,14,19,22 126:25 145:21 146:8,17 147:12 148:1,6,18,24 149:2,8,14 150:17 150:20 151:5,11 151:17 152:10,15 152:24 153:3,22 154:10 155:13,15 155:24 156:2,6,9 156:20 157:5 222:24 223:10 224:6,25 225:5,8 226:1,5,9,17,19 239:8,11 240:24 241:14 242:1,4,13 242:17,19 243:25 244:6,13 245:9 specific 16:16 19:24 39:3,23 49:5 50:7 66:11 66:16 72:9 74:20 79:25 83:18 86:3 87:20,20 95:23 99:16,17 106:18 110:11 112:4 114:14,15 120:9 123:7 130:10 141:24 145:13,19 146:7,9,11,12,22 147:2 148:13,14 149:5,22,23 150:22,24 151:2 152:25 153:7 169:23 174:20	180:19 185:6 189:3,5,13 192:1 200:22 202:20 205:18 207:20,24 208:3,12 216:2,4 218:4 234:2 240:8 specifically 19:4 19:14,17,21 20:11 25:20 26:25 27:12 27:17 29:13 30:25 34:10 36:25 37:3 50:21 51:13 56:5 61:14 62:23 67:25 69:4,12 71:24 73:13 74:14 75:23 86:14 87:13 88:21 89:9,16 94:5 95:6 95:14 96:10 97:9 98:17 103:6 107:6 108:22 109:9,22 109:22,24 111:18 113:2,19 114:7 116:8 118:18 120:22 127:11,18 130:24 132:2,12 132:20 133:22 144:4 145:8,14 162:20 165:23 166:17 187:24 188:4 206:10 216:10 231:22 235:1,12 239:25 specifications 16:5 specificity 208:24 230:12 232:14,19 233:2 234:1 speculation 82:1 spell 22:13 spencer 186:6,7 spend 28:15 30:20 30:23	spent 23:2 24:7,16 25:6 26:7,9,11 28:8 split 116:13 169:8 spoke 22:11,20 24:2,11 25:3,7,8 25:11 26:1 spoken 198:16 227:13 spook 229:3 spreadsheet 12:9 45:25 205:16 210:3 237:13,20 stand 102:17 180:9 standard 166:20 167:13 stands 36:10 103:11 star 167:20,21,24 168:4 start 72:22 75:4 181:11 182:2 183:17 188:8,8,8 203:24 205:19 started 16:1 166:2 169:2 181:9 182:1 starting 14:8 187:5 starts 43:4 216:23 state 14:16 41:21 56:3 69:10 184:15 218:8 249:9,12 stated 75:16 132:25 170:13 244:20 statement 58:23 75:16 79:16 229:14 states 1:1 2:1 162:2	stating 15:10 56:22 statistic 142:9 statute 222:13,16 224:2 statutes 240:2 stay 239:9 stenographic 126:11 172:17 stenographically 1:20 step 78:16 160:19 206:20 steps 143:6 stipulation 241:8 249:20 stop 154:2 222:24 stopped 73:25 storage 25:15 36:13 59:12 84:12 84:21,22 85:2,4,19 88:11 137:18 191:24 store 48:5 110:4 110:22 170:4 stored 62:10 132:8 138:6 170:11 191:16,20 192:17 193:1 207:7,19 208:18 217:17 233:4,11,19 235:20 stores 207:1 237:16 straight 44:9 straightforward 158:25 streamed 237:17 street 3:10 5:9 6:8 7:7
---	--	---	--

[strike - talking]

strike 44:13 54:22 65:13 92:19 100:6 100:10 114:1 129:22,23 130:22 133:14 159:9 166:11 184:25 192:2 197:10 201:3 string 12:4 202:12 202:14 234:24 strip 211:5 stripped 40:20 71:16 142:7 200:8 stripping 38:1,3 structure 87:23 95:21 238:10,11 struggling 121:25 219:14 stuff 11:12 188:22 subject 9:15 11:12 12:4 19:12,17 24:8 65:22 73:2 subscribed 248:21 subsections 240:1 subsequent 245:13 subset 89:23 146:10 149:11 151:3 171:5 173:5 173:7,7,14 199:21 substantively 26:8 substitute 199:5 199:24 subsumed 243:12 244:2 subsumes 241:23 242:9,22 suggest 60:4 suggestion 126:21 126:24 suite 3:11 4:11 5:10 6:9	support 16:19 236:18 supposed 63:23 71:11 132:17 sure 15:12 21:5 24:9 28:7 30:21 31:21 38:17,25 53:15 72:4 88:24 101:1,7 123:21 124:24 157:14 159:16,24 167:9 171:24 175:14,20 182:25 184:3 189:16,21 197:6 197:18 204:10 205:19 210:2 213:13 214:5 217:3,15 221:21 229:14 233:7 239:16,21 survey 208:4 surveys 205:21 206:14 suspend 80:19 suspended 71:22 74:4,13,18 79:23 swap 200:5,6 swears 13:11 switched 169:10 synthetic 112:5 141:5,16 142:6 192:9 system 36:14 37:20 62:11 76:3 84:13 85:19 88:12 102:15 143:13 180:13 systems 24:19 25:15,23,24 39:4 59:12 75:24 84:7 84:18,21,22 85:3	112:1 131:17 137:19 138:14 210:23 211:2 236:18 t t 6:6 8:8 9:1 10:1 11:1 12:1 22:16 22:17 120:1 195:7 195:8 251:3,3 tab 54:21,24,25,25 86:5 91:24 106:11 138:17 163:1 184:25 185:3 194:3 table 41:14 82:7 82:17,18,20,21,22 83:4,13,25 84:14 85:19 86:3,11 87:19,20,22 90:11 91:4 93:12 95:19 95:19,23 96:14,17 99:3,16,17 101:8 102:9,10,12,21 103:10,22,23 104:2,6,12,16,19 106:5 113:11 114:13,14,15,23 116:17 141:1,4,4 141:15,15,16 142:13 158:19 165:8 198:16 201:7,14 tables 9:19 68:9 71:11 85:17 86:23 90:14,16 91:4 92:22 93:5,25 94:10 97:11,13,24 98:7,9,12,14 102:24 140:10,11 144:18 190:16 238:8	tagged 49:25 take 16:20 21:13 32:18,20,21 46:22 63:10,12 70:24 77:13 78:16 90:21 96:20 104:23 127:25 144:20 148:11 153:25,25 155:17 157:7 179:10 194:10 203:7 234:11 243:3,16 taken 2:16 18:25 32:2,25 33:11 74:20 75:3 77:19 79:12,25 81:8,10 81:18,24 115:1 127:4 144:24 157:16 172:22 194:15 213:15 248:5 talk 68:15 73:15 108:12 132:2,12 145:13,16 146:4 146:25 151:10,11 152:2 155:8 189:11 207:19 208:10,13,17,23 210:7,21 talked 165:6 170:9 229:7 talking 19:3 24:7 26:12 34:11 67:9 73:19 74:14 113:14 122:25 124:22,24 149:6 149:12 159:18 169:24 195:12,17 200:10,20,24 224:9
--	--	--	--

[talks - tie]

talks 143:5 150:3 208:3	telling 129:6 246:3	76:14,18 79:9	237:22
tao 59:11 82:19,24 102:16 104:17 201:4,11,15,15 202:9	tells 60:3 99:4 159:1	81:21 89:17 90:8 98:17,24 99:13 103:7 107:7,15,24 108:23 109:9,25 111:19 112:10 113:3 114:8 125:1 127:19 130:17,25 132:18,21 133:23 134:15 136:3 144:4 147:24 160:16 243:15 245:8,11 247:4 248:12	think 33:14 40:21 42:3,25 46:8 54:21 56:19 57:2 64:4 72:11 77:7 84:20 91:15,21 92:8,20 106:1 114:6 118:9,10 128:5 137:13 149:11 153:1 154:13 156:2,3 157:6 162:9 168:19 169:22,24 174:6 181:23 192:11 200:2 205:6 208:23 213:2,3 222:10 230:6 231:15 237:12 240:13
task 57:8 143:13 143:13	temporally 53:24	testing 31:9	thinking 117:9 158:25 159:8
taxonomy 172:8	ten 100:3 240:1	text 65:21	third 4:10 19:7 27:3 72:18 99:25 107:2 128:5 131:4 132:9,15 133:2,7,8 134:4 167:24 168:4 176:14,16 176:19 177:6,8,15 178:1 184:11,18 191:14 193:11 209:4,16 216:21 216:23 227:13,20 227:24,25 228:5
tbds 204:11	tent 168:11	thank 15:20 17:12 21:14 23:11 37:22 38:24 63:19 68:11 76:10 77:14 78:7 89:3 104:22 143:24 163:14 188:12 201:17 202:23 213:6,8 238:12,16 240:22 242:17,19 243:25	thought 157:2,5
team 17:5,7	term 34:6,6 50:14 137:7 138:8 162:22 169:2,6 174:15 175:4 232:12,18,25 240:15 241:20,22 241:24 243:2,7 244:5	thanks 21:9 77:17	three 15:22 18:25 26:4 45:25 83:8 106:16 233:3,5 239:25 240:2
teams 16:20 217:3	terminal 209:8	theirs 57:23 58:7	thursday 65:8
tear 200:18	terminate 184:17	theoretical 182:8	tie 35:2 37:5 40:19 106:6 116:18
tech 169:9	terminates 177:7	thing 36:1,3 56:21 78:3 91:22 167:10	
technical 24:18 26:21 34:7,22 38:2,7 39:3,5 50:14 54:13 75:24 80:17 111:2,7,7,14 116:20 117:1 145:22 146:17 148:13 149:15 151:23 152:5 153:3 202:5 210:18 232:12	terms 21:24 168:12 199:6 217:1 240:20	things 38:20 41:1 70:19 100:24 110:5,23 120:19 137:16 149:4 162:23,24 169:17 169:25 170:20 173:9 180:13 182:14 197:25 216:9 221:25 229:6 231:6	
technically 40:17 40:18 53:14,20 62:4,12,16 70:20 75:25 96:16 109:24 110:6 120:13 198:17 201:25 237:6,8,11	testified 15:3 28:10 112:11,21 136:9 226:20 240:15		
teenager 18:15	testify 17:20 108:5 108:6 111:11 122:9 129:15,19 130:8 134:19 136:17 146:13 147:13 148:21 150:1 152:4 153:13 155:6 207:13 208:6 243:19 244:16 245:6		
telecommunicati... 18:16	testifying 17:14 19:25 130:2 224:5 248:8		
tell 21:11 51:6 55:12 75:4 99:2 105:10 108:16 128:1 164:9 165:19 181:23 186:2 221:15	testimony 14:16 19:13 46:22 51:13 61:20 67:19 76:11		

[tie - turning]

138:3 162:25 202:14 tied 38:9 68:4 116:17 120:22 231:2,5 time 13:6 14:4 16:2,11 23:1 24:2 24:7,14 26:11,14 27:2,2,6 28:16 30:23 33:8 44:24 54:14 60:24 63:5 63:7 65:23 67:2 67:14 68:2 69:11 71:11 74:3,9,11,21 80:1 95:12 97:16 97:22 101:9 113:10 114:17,22 116:4 118:3 131:8 131:12,16,17,17 138:11 153:23,23 153:25 154:1,1 155:16,21 159:8 159:15 187:25 196:16 197:5 199:4 204:9 210:13 214:23 215:16 233:15 238:16 241:8 246:7 248:6 249:10,18,24 250:7 timeline 31:20 44:9 times 105:20 timestamp 159:7 timing 53:25 title 15:23,24,25 23:15,17,20,24 24:15 25:1 178:13 229:16	titled 139:9 179:17 195:7 214:21 today 13:17,23 15:9 17:13 21:24 22:7 30:11 47:6 112:22 147:25 163:22,24 178:11 188:24 211:10 215:4 218:7 219:6 219:10,17 221:15 223:1 236:7 told 21:5 81:7 tool 88:3,16,17 89:13,20 131:5 134:6 143:11 144:3,7,14 165:7 165:15,16 166:2 187:10 188:11 234:16 tools 86:22 89:1,2 89:5,6,13 111:22 149:15 150:23 182:18 188:6 top 53:19 55:2 91:13 163:8 164:21 195:3 218:13 230:1,18 topic 17:21,23 38:18 39:9,11 108:19 122:11 134:23 135:2,15 145:2 147:14 148:15 149:12 150:3,4 152:13 153:13 154:22 155:22,23 160:16 189:7 213:4 238:15 topics 25:18 155:25	total 18:8 24:10,16 totally 100:9 tour 75:3 tpid 209:21 227:12 tpm 20:16 trace 196:25 track 68:24 69:6 69:14,25 70:6 78:18 trackable 79:1 tracked 199:22,23 tracking 147:22 180:13 tracks 127:14 training 116:23 210:23 transactions 100:23,23 228:5 transcribed 248:11 transcript 21:24 131:23 247:3 248:12,14,16 249:6,8,10,13,13 249:21 250:2,2 transfer 209:4 transform 234:14 235:8 transformation 234:10 transformed 141:22 233:23 234:4 235:15,19 235:25 transforms 234:9 translation 210:23 211:2 transmit 132:10 treated 146:24 147:4,5,8	treats 145:10 trick 68:12 trigger 196:5 triggered 71:10,12 74:21 80:1 triggering 143:16 triggers 71:6 true 45:9,14 101:23 102:1 181:5,6,20,22 182:1 247:5 248:12 truly 219:13 trust 161:20,20 214:11 truth 14:18,18,19 101:18 177:5 184:10 try 53:8 83:21 85:11 112:14 118:14 140:12,16 140:17 169:5 171:11 197:11 199:14,15 201:20 203:21 trying 37:12 39:25 61:19 68:12,13 79:21 104:21 125:6 143:3,25 156:11 165:21 168:16 182:17 199:17 202:2 205:24 221:20 242:21 tuesday 204:14 turn 42:15 52:4 72:7 106:11 117:7 157:25 161:10 189:17 190:9 turning 115:4 205:15 230:1
--	--	--	--

[two - updated]

two 21:1 26:7 36:18 43:10 45:21 64:4,18 69:20 83:8 101:12 110:4 110:23 112:15 116:18 143:10 148:2 175:19 179:21 194:8 197:18 211:2,11 228:12,16 230:16 243:14 tying 37:6 type 171:19 182:13 217:8,16 typed 32:8,9,11,11 44:5 61:6 161:7 types 109:5 110:5 110:23 116:11 171:20 172:10 190:22 216:5,8,12 216:13 217:2 218:5,6 typo 230:6	uid 36:1,2 83:4 85:21 99:9,10 100:1 108:7 137:25 139:24 141:17,17,19 142:13 158:19 169:14 170:18 174:22,25 175:21 176:1 179:23,24 180:3 183:2,7,23 184:4,9,19 196:23 196:24 197:1,8,9 197:12,15,21,21 198:5,8,10,17 199:6,19,21,23 200:5,13 201:8,14 201:20,22 202:2 231:3 uids 74:6,15,25 97:6,13,16,25 98:13 141:15 181:1 183:3 211:5 uii 10:13 12:12 68:4 105:20,21,22 106:21 117:9,16 117:17,20,21,25 118:23 119:15 136:25 137:1 138:2 139:25 142:7 144:11,16 144:17 159:22,24 160:3,9,11 164:18 165:9,24 167:1 169:2,13 170:13 173:7,7,10,14,20 175:10,25 176:1,5 176:8,9,11 191:22 192:17 198:23 200:7,7 202:15 214:15,16,21 215:13,15,17,23	216:1,2,8,11,22,24 217:7,16 218:2,5 221:12 231:11 236:11,14 238:1 240:21 241:24 242:2 ulmer 5:7 13:24 unable 160:14 unclear 131:13 199:3 underlying 82:22 underneath 180:2 underscore 93:13 131:3 understand 17:13 17:23 28:6,25 30:6 39:9,10 65:18 68:13 77:23 80:16 81:17 85:8 88:13 94:25 96:17 123:22,23 131:14 131:22 147:17 148:17 156:20,22 167:2 168:3 169:13 194:19 197:6 199:17 210:18 215:5 240:17 243:14 244:18 understandable 206:1 understanding 18:2,3 27:23 29:9 29:10,15,20 30:10 33:21 34:4 48:22 54:8,15 59:21 65:12,20 66:2 77:10 78:23 80:4 80:7 81:23 82:14 87:23 92:11 94:11 108:2 112:24	138:13 159:10,17 159:21 170:14,16 172:6 180:24 182:15,16 184:7 188:16 214:19 215:10,25 216:17 217:19 219:24 222:4 223:25 224:16,23 225:24 242:23 understood 17:11 22:3 95:21 168:15 175:14 187:19 228:17 229:25 245:3 unfortunately 117:19 172:12 174:3 unfriend 60:3 unhashed 212:9 unique 101:14 109:1 120:6,8,8,9 127:14 130:4 176:21 180:19 184:12,12 229:1,3 230:10,13 uniquely 107:10 216:14 united 1:1 2:1 162:2 universe 177:5 unix 131:17 unlock 193:13 unreasonable 240:6,14 unstructured 37:15 update 63:2 updated 65:6 143:15 227:10 229:17
u			
ud 52:12 udb 58:25 59:5,9 82:7 85:20 102:8 udd 45:22 uddb 58:22 uddp 26:18 44:17 45:22 52:14 72:1 72:2 105:23 udtf 143:20 ugc 61:4,12,24 67:4 160:22 161:2 217:16 232:4 233:6,10 ugly 199:14 uh 118:20 ui 143:16			

[updates - visibility]

updates 143:15 204:12 upload 41:23 137:13,14,20 161:20 uploaded 40:24 41:3,7,8 49:17 75:19 137:21,23 138:2 uploads 138:10,12 url 127:17,21 135:5 168:6,8 us.pwc.com. 64:10 usable 234:12,17 use 35:12,13 36:5 39:5 40:21,23 75:2 84:10,14 86:21,23 88:16,25 89:1,4 96:8 105:17 119:7,11 131:6 137:11 165:25 169:6 175:4 176:16 177:19,20 178:2 209:20 235:9 241:20 243:6 user 1:4 2:4 8:15 10:5 13:9 16:6 18:1 34:12,13,25 35:1,4,10,11,13,20 35:20 36:15,17,22 37:2,3,4,6,8,10,16 37:17,21 38:21 39:6,12,19 40:7,10 40:19,24 43:20 45:22 47:3,4,14 48:9,13,18,18,22 48:24,25,25 49:2,5 49:10,13 50:3,9 51:2 52:12 57:10 57:21,24 58:9,14	59:6,23 60:15 61:4,6,7,11,16,23 62:19 65:25 66:20 67:3 68:4,6,18 70:24 72:22 74:21 75:1,10 78:15,18 80:1 83:3,15 84:1 84:6,8,16 87:4,10 87:17 91:5 92:22 95:10,12,22 97:4 97:11 99:2,5,6,18 105:17,19 109:4 115:7,19,20 116:1 116:22 117:2,3,6 131:24 132:10,10 132:18 133:1,9,25 133:25 134:10,12 134:20,21 137:2 137:24 141:2,7,10 142:1,3 143:21 145:5 147:19 150:4,11,12,15 151:1,2,9 152:10 152:11,23 154:22 154:25 158:14 159:1,5,12 160:25 161:3,5,8,21 164:16 169:3,16 170:12,17,19 171:5,18,20 173:5 173:6,8,8,20,21,22 173:23,23 174:1,2 174:4,8,10,10,12 174:14,14,16,23 174:24,25 175:7 175:11,17,18,21 175:21 176:4,8,10 176:12,17,18 177:6,9,14,15,17 177:17 180:18 183:4,5,7,24	184:10,10,12,16 184:19 186:11 189:8 191:19 192:1,23 193:4 196:15 198:24 200:6 201:16 202:5,5,10,13 207:1,7,15 216:11 216:22 217:4,15 222:11 228:3,15 228:15 229:18 231:5 235:5,7 236:4,11,13,13,19 237:9,24 240:21 user's 35:3 36:12 userid 78:16 94:22 95:9 users 41:16 52:22 57:3 67:12 68:22 69:14,25 73:5 82:6 91:6 93:12 93:15,20 95:20,20 101:19 102:25,25 134:1 145:9 147:23 150:22 153:11 161:19,19 181:15 182:4 188:25 192:4 193:9,23 users.php 187:15 uses 25:22 119:9 145:8 148:21 201:16,19 232:18 241:24 usually 173:8 185:18	variety 119:20 173:18 232:12 vc 1:4 2:4 vendor 211:6 verbal 21:21 veritext 13:10 249:7,9,11 version 47:18 59:10 229:2 versions 25:7 65:11 140:11 versus 48:6 107:11 216:5 video 1:14 2:19 161:9 videoconference 1:14 2:19 3:2 4:2 5:2 6:2 7:2 14:8 videographer 7:19 13:5,10 32:23 33:1 77:17,20 78:1,6 127:2,5 144:22,25 157:14 157:17 172:20,23 194:13,16 213:9 213:13,19 239:17 239:20 246:5 view 181:13 216:18 viewable 196:7 violate 181:15 182:3 violates 96:8,9 violation 97:19,20 198:20 violations 164:23 166:12,18,25 167:5,23 168:5,14 168:19 visibility 115:14
		v	
		v 54:4 187:5 validate 188:8 values 169:15 170:2,6,19 229:7	

[visit - weaver]

visit 120:9 147:23	warehouse 36:14	33:9,10,20 35:22	125:7,11,15 126:1
volume 1:17 8:3	36:16 37:7,9,10,14	37:1,22 38:17	126:4,12,17 127:7
100:22 249:5	54:6 59:14 62:15	39:24 40:15 42:1	127:16,25 128:19
251:2	67:10 68:2 76:3	42:13,20 43:9,18	129:5,11,14,21
vs 216:22,22	85:3 136:25	43:22 45:15 46:16	132:9 133:10
w	139:22 200:25	46:19,21,25 47:22	134:11,17 135:3,7
w 4:8 7:7 22:15	233:4,11,19,22,25	48:8 49:23 50:8	135:21,22 136:6
wait 65:13 122:17	235:24 236:1,8,19	51:2,8 52:1 53:22	136:20 138:16,21
155:24,24 224:6,6	236:24 237:2,16	54:20 55:6 56:11	138:24 139:2
waiting 43:8,10	washington 1:23	56:18,24 58:8,13	140:16,19 144:19
45:17 55:9 72:8	4:12	58:24 59:15,20	147:10,14 148:2
86:9 91:1 96:1,2	waste 155:16	60:9 61:1,18 62:6	148:17 150:2,10
163:7,15	water 77:15	62:20 63:10,18,20	150:12,15,19
waived 249:23,23	way 21:12 35:22	63:24 64:1,11	153:1,5,17 154:5
waiving 249:20	37:13 40:7,9 42:4	65:1 66:4,13,24	154:11,13,19,24
walk 152:16 192:9	42:8 44:4,4 51:8	67:18 68:11 69:12	155:15,20,25
224:20	62:19 68:6 93:3,7	69:22 70:9,12,21	156:5,22 157:9,19
walked 236:7,10	98:19 106:18	71:6,17 72:4	158:6,9,10 159:16
walking 42:2	109:3 110:14,17	73:19 74:10,24	160:1,12,18
walks 195:16	110:21 114:25	76:8,11,21 77:4,13	162:16 163:1,6,10
wall 51:11 60:17	120:14,16 146:24	77:22 78:4,8,9	163:25 164:6
want 29:25 30:19	147:4,5 153:17	79:3,8,18 80:8,23	167:2,19 170:15
30:21 61:18 77:15	157:12 181:8	81:22 82:16 83:10	171:10 172:13,25
115:16 122:23	188:2,7 191:16	83:20 84:17 85:23	173:25 175:16
123:18,21 124:19	192:1 199:1,20	86:5,9,17,25 87:9	176:11 178:8,17
124:23 126:4	200:4 217:17	88:2,13 89:3,14,24	179:8 184:6,24
148:7 155:16	222:25 234:7,22	90:21,25 91:23	186:21 187:19
157:9 161:21	237:16	92:7,18 93:8,19	188:23 189:4
167:9 169:22,22	ways 35:18 145:22	94:12,21 95:11,24	191:5,9,25 193:7
175:14,19 197:5	191:20 232:13	96:19,23 97:1,12	193:20 194:1,7,11
197:18 203:21,24	235:15	97:23 98:10,21	194:18,21 195:1,5
210:2 214:5 215:7	we've 42:16 67:9	99:19 102:2,17	197:7 199:2
223:3 233:6 239:8	74:14 103:22	104:2,6,22 105:4,9	200:11,20 201:11
239:15,17,18	160:13 190:20,21	106:10,13 107:20	201:17,18 202:16
243:3	236:7	108:4,15 109:7	202:22 203:7,23
wanted 44:9 83:2	weaver 3:6 8:5	112:9 113:16,22	204:21,25 205:8
87:3,9 118:16	13:14,15 14:10	114:18 116:19	205:15 206:12
192:19	15:6,8 19:24	119:9,15,22 120:7	207:11,21 208:1
wanting 138:9	20:17 27:11 28:7	120:15 122:7,12	208:13,25 209:19
wants 151:18	29:23 30:6 31:14	122:18 123:5,9,15	210:22 211:1,11
239:13	31:25 32:2,15,18	124:2,16,19,25	212:3,14 213:2,11

[weaver - zoom]

213:21,24 214:8 214:10,12,18 218:3,14 219:7,16 220:14 221:9,23 222:9,17,20 223:7 223:12,18,22 224:4,12,21,22 226:1,9,10,18,23 226:25 227:3 233:16 234:3 235:18,25 236:16 237:10 238:12,21 239:12 241:16 249:1 web 1:14 2:19 3:2 4:2 5:2 6:2 7:2 119:3,6 129:25 164:19 170:5 228:25 websites 147:23 wednesday 1:16 2:18 13:1 55:4 week 204:15 weekend 55:17 65:16 weeks 64:4 148:2 welcome 157:3 whatsapp 229:23 whereof 248:20 wide 102:21 103:9 216:4 wiki 9:9 10:4,9,13 10:19 11:4,16,20 12:12 47:10,18 55:22 57:1 64:19 64:21 65:3,10 97:3 101:6 105:16 117:15,20 139:8 139:10 158:4 164:23 168:8,10 168:12 179:17,19	195:6,7 214:20,21 215:14 wiki's 26:20 wikis 44:19 windmills 239:22 window 71:10,21 237:23 wipe 160:22 wiped 160:3 wished 201:20 witness 13:11 108:18 123:24 125:16 147:20 148:12 153:9,12 213:4 224:14,14 225:1 226:19,21 238:24 239:9 240:4,5 241:11,22 242:14 243:11,18 244:20,24 245:18 248:20 249:13,16 250:2,5 251:24 witness's 238:25 wondering 208:5 word 33:21 34:5 35:6 37:23 39:1,5 49:11 73:22 94:19 106:17 107:2 222:14,14 words 43:14,20 55:2 61:2,5 109:13 152:9,23 168:5 181:21 239:25 work 42:23 46:20 75:21,24 88:3,17 128:18 130:14 145:23 152:20 164:7 171:18 196:9 207:22 219:4,20 220:12	220:24 224:20 225:19 237:13 worked 15:21 16:11 18:16 210:12,13 220:1 workers 195:14 working 56:16 74:4,12 96:17 99:16 107:19 118:16 221:2 225:17 workplace 164:7 works 75:6 113:19 140:23 141:14 143:5 173:6 192:13 237:13 worldwide 73:3 wrap 246:1 wright 13:20 write 89:22 90:13 writes 171:17 writing 44:24 56:7 162:11 173:2 237:18 written 35:5 36:16 87:25 141:22 166:17 167:8 182:13 238:8,9,11 wrong 100:6,7 wrote 56:7 169:1 www 104:14	y yeah 16:22 26:17 27:8 31:4 39:24 42:11 49:25 54:22 72:24 77:13 78:6 79:20 95:5 104:10 117:11 122:5 124:10,13 125:7 131:15 143:2 149:16 150:19 156:19 158:17 164:3 168:25 169:4 170:22 171:13,16,23 172:6,20 181:25 182:6 185:21 187:1 212:19 223:13 226:18 240:24 241:15 year 19:11 21:8 years 15:22 75:20 yep 140:18 yiannis 22:12 24:10,11 yiannis's 24:15 yup 31:16 55:19 66:24 97:23 148:17 158:21
			z
			z 22:15 zarashaw 22:14 26:5 zero 154:1 zoom 1:12
			x x 8:1,8 9:1 10:1 11:1 12:1 134:20 248:16 250:9 xc 131:24 xfn 189:23 xs 132:25 133:1,25 133:25 134:20,21 xyz.com 141:8

Federal Rules of Civil Procedure

Rule 30

(e) Review By the Witness; Changes.

(1) Review; Statement of Changes. On request by the deponent or a party before the deposition is completed, the deponent must be allowed 30 days after being notified by the officer that the transcript or recording is available in which:

(A) to review the transcript or recording; and

(B) if there are changes in form or substance, to sign a statement listing the changes and the reasons for making them.

(2) Changes Indicated in the Officer's Certificate. The officer must note in the certificate prescribed by Rule 30(f)(1) whether a review was requested and, if so, must attach any changes the deponent makes during the 30-day period.

DISCLAIMER: THE FOREGOING FEDERAL PROCEDURE RULES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

THE ABOVE RULES ARE CURRENT AS OF APRIL 1, 2019. PLEASE REFER TO THE APPLICABLE FEDERAL RULES OF CIVIL PROCEDURE FOR UP-TO-DATE INFORMATION.

VERITEXT LEGAL SOLUTIONS
COMPANY CERTIFICATE AND DISCLOSURE STATEMENT

Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

Veritext Legal Solutions is committed to maintaining the confidentiality of client and witness information, in accordance with the regulations promulgated under the Health Insurance Portability and Accountability Act (HIPAA), as amended with respect to protected health information and the Gramm-Leach-Bliley Act, as amended, with respect to Personally Identifiable Information (PII). Physical transcripts and exhibits are managed under strict facility and personnel access controls. Electronic files of documents are stored in encrypted form and are transmitted in an encrypted fashion to authenticated parties who are permitted to access the material. Our data is hosted in a Tier 4 SSAE 16 certified facility.

Veritext Legal Solutions complies with all federal and State regulations with respect to the provision of court reporting services, and maintains its neutrality and independence regardless of relationship or the financial outcome of any litigation. Veritext requires adherence to the foregoing professional and ethical standards from all of its subcontractors in their independent contractor agreements.

Inquiries about Veritext Legal Solutions' confidentiality and security policies and practices should be directed to Veritext's Client Services Associates indicated on the cover of this document or at www.veritext.com.